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ABSTRACT

As part of the 1977 British Columbia Mathematics Assessment, over 100,000 students from Grades 4, 8, and 12 were given tests designed to measure mastery of a limited number of important mathematical skills and concepts. Approximately 3,500 teachers of mathematics at seven different grade levels (1,3,4,7,8,10,12) completed comprehensive questionnaires dealing with numerous aspects of the methods and materials in the teaching of mathematics in the province. This report is one of a four-part series and gives a review of the items and data from both the Student Tests and Teacher Questionnaires. (MN)

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BRITISH COLUMBIA
MATHEMATICS ASSESSMENT
1977

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Technical Report

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THE MINISTRY OF EDUCATION
PROVINCE OF BRITISH COLUMBIA

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SE 023 992

THE B.C. MATHEMATICS ASSESSMENT

Report No. 3

TECHNICAL REPORT

September 1977

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BRITISH COLUMBIA MATHEMATICS ASSESSMENT (1976-77)

TECHNICAL REPORT

The Technical Report has been prepared for teachers, researchers, and others who may be interested in reviewing the items and the data from the Student Tests and Teacher Questionnaire. Anyone requiring access to the data tapes should contact the Director of the Learning Assessment Branch of the Ministry of Education.

This volume is one in a series of four reports dealing with the Mathematics Assessment. The other three are entitled Test Results, Teacher Questionnaire, and Summary Report respectively. Copies of all reports may be obtained from the Learning Assessment Branch.

The present report is divided into two Sections, with the first page of each section being labelled as Page 1. Section I concerns the Student Test results, and Section II concerns the Teacher Questionnaire.

Student Tests

Student Tests were constructed for administration at three grade levels: 4, 8, and 12. The mathematics topics tested were selected from those topics which most informed observers would agree are among the essential concepts and skills of mathematics at the three levels tested: end of primary education, end of elementary education, and end of public schooling. Three levels of cognitive behaviour, called domains, each sub-divided into a number of objectives, made up the framework of the assessment.

For each test, a total administration time of ninety minutes was allotted: thirty minutes for instructions, distribution, and collection of the test booklets and answer cards, and sixty minutes for completion of the test.

Pilot testing of the assessment instruments was conducted during the late fall of 1976 in several school districts across the province. Approximately 250 students at each of the three grade levels involved wrote the tests, and their results were used in deciding upon the final form of the tests.

With the exception of a portion of the Grade/Year 4 test, all of the test items were cast in multiple-choice format with five foils or distractors for each item. In every case, the foils consisted of four possible answers to the item while the fifth foil was "I don't know". The "I don't know" option was used in an attempt to minimize guessing and in order to provide an outlet for students who, for one reason or another, had not been exposed to the material being tested or had forgotten it.

In an effort to assess change in students' abilities to deal with certain concepts and skills, some items appeared on two or more of the tests. For example, the same five items dealing with knowledge and understanding of the units of the metric system of measurement were used on all three tests. In several of the skill areas, the same item or items appeared on the Grade/Year 4 and 8 tests, or on the Grade 8 and 12 tests. Overall, there were nine items common to the Grade 4 and 8 tests, and forty-three items common to the Grade 8 and 12 tests. This includes five items which were common to all three tests. All individual grade level results on such items are contained in this report in order to facilitate comparisons.

Slightly more than one hundred thousand students at three grade levels completed the Mathematics Assessment tests. As the data in Table 1 show, the rate of response varied from a low of seventy-one percent at the Grade 12 level to ninety percent at Grade 8, and ninety-six percent for Grade/Year 4.

Table 1
Rate of Completion of Mathematics Assessment Tests

Grade/Year	Enrolment as of 2-28-77*	Number of Completed Tests	Percent
4	36 540	35 277	96.5
8	46 808	42 250	90.1
12	32 532	23 136	71.1
OVERALL:	115 880	100 663	86.9

* from data supplied by the B.C. Ministry of Education

Of the three grade level groups, the Grade 12 one was the only one which had a lower return rate than might have been attributed to normal absenteeism. In addition, some concern was expressed to the effect that senior secondary students might not have taken the test seriously and responded frivolously.

The National Assessment of Educational Progress (NAEP) program in the United States has encountered similar difficulties of non-participation. In their first analysis they assumed that the non-participating group was similar in composition to the entire population, and that those individuals' failure to participate would not affect the overall results. Subsequent studies have shown that the non-participating group is not exactly similar to the rest of the population, and that their lack of participation could result in artificially inflated results. NAEP has stated that the extent of this inflation is almost certainly not great enough to affect decision-making. For example, a success rate of 67% achieved by those responding to a given test item might represent a true success rate of 64% for the entire population.

To check for the extent of frivolous response on the Grade 12 test, two steps were taken. Each of the computer cards which were completed by the students was hand-checked for completeness and for obvious patterns of frivolous response, such as the constant use of a single response category or the repetition of a series of responses: ABC ABC ABC ... Thirty-two such instances (0.1% of the total) were found. Secondly, a computer analysis was undertaken to identify those students who had, in all likelihood, responded by guessing or by selecting answers at random. Two hundred eight such cases were found, less than one percent of the total.

In summary, the best data available at this time lead to the conclusion that, despite the fact that a sizable proportion of the Grade 12 population failed to take the Mathematics Assessment test, the overall results obtained by those who did are an accurate representation of the total population. Moreover, analysis of individual students' response patterns has failed to show any evidence of widespread lack of due care and attention in completing the test.

Information concerning the reliability of the three student tests is contained in Tables 2, 3, and 4. The reliability coefficient is sensitive to the number of items in a test or sub-test and this may account for the apparently low reliability of some of the sub-tests for certain objectives. The reliability data are based upon the results obtained by a 10% sample of the students at each level tested.

Coefficients of correlation were computed for each of the foils on the multiple-choice items. The point biserial correlations associated with the incorrect foils were negative for all test items, and those associated with the correct choices were positive.

Table 2
Grade/Year 4: Reliability Data

	No. of Items	Hoyt* Reliability
Domain 1		
Objective 1.1	24	0.91
Objective 1.2	5	0.46
Objective 1.3	5	0.59
Objective 1.4	6	0.55
Domain 1 Summary:	40	0.91
Domain 2		
Objective 2.1	6	0.60
Objective 2.2	4	0.29
Objective 2.3	5	0.44
Objective 2.4	2	0.38
Domain 2 Summary:	17	0.72
Domain 3		
Objective 3.1	6	0.59
Objective 3.2	6	0.70
Domain 3 Summary:	12	0.78

* The Hoyt coefficient of reliability is equal to that given by KR-20.

Table 3
Grade 8: Reliability Data

	No. of Items	Loyt Reliability
Domain 1		
Objective 1.1	5	0.52
Objective 1.2	4	0.64
Objective 1.3	5	0.56
Objective 1.4	9	0.69
Objective 1.5	4	0.50
Objective 1.6	5	0.68
Domain 1 Summary:	32	0.88
Domain 2		
Objective 2.1	6	0.49
Objective 2.2	5	0.17
Objective 2.3	4	0.43
Objective 2.4	3	0.40
Domain 2 Summary:	18	0.70
Domain 3		
Objective 3.1	7	0.67
Objective 3.2	3	0.46
Domain 3 Summary:	10	0.74

Table 4
Grade 12: Reliability Data

	No. of Items	Hoyt Reliability
Domain 1		
Objective 1.1	4	0.63
Objective 1.2	5	0.51
Objective 1.3	14	0.75
Objective 1.4	7	0.72
Domain 1 Summary:	30	0.88
Domain 2		
Objective 2.1	6	0.57
Objective 2.2	5	0.52
Objective 2.3	4	0.45
Objective 2.4	9	0.77
Domain 2 Summary:	24	0.85
Domain 3		
Objective 3.1	9	0.70
Objective 3.2	7	0.68
Objective 3.3	2	0.40
Domain 3 Summary:	18	0.82

Teacher Questionnaire

Two questionnaires, one for teachers of elementary school mathematics and the other for teachers of secondary mathematics, were developed for use in the Mathematics Assessment. The questionnaires, which were completed anonymously, dealt with various aspects of the teachers' backgrounds and training as well as with facets of the methodology of teaching mathematics at different levels and with instructional practices used by teachers of mathematics.

The Form J file*, dated 30 September 1976, was used to sample teachers. Since questionnaires were being sent out for three different assessments at approximately the same time, steps were taken to control the number of questionnaires sent to any one teacher.

First, the number of courses on which each teacher qualified for sampling was calculated. Teachers who taught no mathematics did not qualify as potential respondents to the mathematics questionnaire. Each qualifying teacher was included on a list of teachers, all of whom qualified for the same number of courses. For example, the names of all teachers who taught three courses were placed on one list. Teachers who qualified for only one course were automatically assigned to that questionnaire sample. In the list of teachers qualifying for two courses, the first teacher was assigned to the first course listed by him on Form J, the second was assigned to his second course, the third to his first course, and so on. The lists containing names of teachers who qualified for three, four, or more courses were treated in similar fashion.

The end result of this procedure was a sample of teachers of mathematics which contained a higher proportion of mathematics specialists and a lower proportion of teachers of single sections of several subjects than the true population of teachers of the subject-grade combination being considered. Given the purposes of the assessment, such a bias was not undesirable since it resulted in an oversampling of those teachers who should be the most knowledgeable in the field of Mathematics Education.

The original goal was to oversample each grade level population by twenty-five percent to ensure obtaining the desired number of returns. As the data in Table 5 indicate, this was impossible at some levels because the entire population, as defined here, was sampled. The population figures, the number of teachers sampled, the number of completed questionnaires returned, and the rate of return are presented in Table 5. The sampling was systematic since the data file was ordered by district.

Two hundred nine questionnaires were returned by teachers who had neglected to indicate on the front cover of the questionnaire in which grade level group they were to be classified. The data from these questionnaires was not included in the data analysis, but subsequent inspection of these booklets resulted in their grade levels being identified. Hence, although they were not included in the data analysis, they were included as completed returns in Table 5. The numbers of questionnaires analyzed were as follows: Grade 1 - 507; Grade 3 - 501; Grade 5 - 524; Grade 7 - 492; Grade 8 - 383; Grade 10 - 275; Grade 12 - 89.

* Form J is completed by teachers each September. The file contains data on the training, experience, and workload of all teachers in the province.

Table 5
Teacher Sampling

Subject/Grade Group	Population	Size of Sample	Completed Questionnaires	Return Rate
Grade 1	2 010	625	532	85.1
Grade 3	1 796	625	521	83.4
Grade 5	1 699	625	561	89.8
Grade 7	2 049	625	530	84.8
Math 8	489	489	420	85.9
Math 10	361	361	292	80.9
Math 12	101	101	99	98.0

B.C. Mathematics Assessment - Technical Report

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Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Mastery of Number Facts

Reporting Category	N	Mean % Correct
Total	35,277	88
11 years or older	1,686	78
10 years	10,987	88
9 years	20,768	90
8 years or younger	1,480	88
Born January-March in 1967	7,104	91
Born April-September in 1967	14,462	90
Born October-December in 1967	5,876	89
Males	18,046	87
Females	17,053	89
One school attended	15,694	90
Two schools attended	10,021	89
Three schools attended	4,944	87
Four or more schools attended	3,974	85
Born in Canada	26,215	89
Not born in Canada	4,389	89
2 years or less in Canada	1,012	90
3 years in Canada	704	90
4 years or more in Canada	2,466	90
English spoken before Grade 1	28,480	88
Other language spoken before Grade 1	5,977	88
English usually spoken in the home	29,596	89
Other language usually spoken in the home	5,235	87

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Mastery of Number Facts (continued)

Reporting Category	N	Mean % Correct
Non-Canadian, Non-English	1,351	92
Canadian, Non-English	1,269	90
1st Generation Canadian	1,454	84
Non-Canadian, English	1,878	88
Canadian, English	20,823	90
Have used a hand-held calculator	26,360	89
Have never used a hand-held calculator	8,239	86
Use a hand-held calculator at home	17,615	89
Do not use a hand-held calculator at home	17,164	88
Use a hand-held calculator for homework	4,547	87
Do not use a hand-held calculator for homework	30,418	89
Use a hand-held calculator in school	1,091	86
Do not use a hand-held calculator in school	33,827	88
Do not usually watch T.V.	1,396	87
Watch T.V. less than 1 hour/day	1,383	85
Watch T.V. about 1 hour/day	2,786	88
Watch T.V. about 2 hours/day	5,759	89
Watch T.V. about 3 hours/day	6,791	90
Watch T.V. about 4 hours/day	5,949	90
Watch T.V. about 5 hours or more/day	10,902	88

Grade/Year 4 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Mastery of Number Facts

Item 1.1.1: (1) $\begin{array}{r}4\\+7\\\hline\end{array}$

Responses	Percent
11	96
28	1
12	1
10	1
13	*
Other	1
Missing	*

Item 1.1.2: (2) $\begin{array}{r}6\\+8\\\hline\end{array}$

Responses	Percent
14	96
48	1
13	1
15	1
12	*
Other	1
Missing	*

Item 1.1.3: (3) $\begin{array}{r}9\\+6\\\hline\end{array}$

Responses	Percent
15	97
54	1
16	1
17	*
18	*
Other	1
Missing	*

Item 1.1.4: (4) $\begin{array}{r}8\\+9\\\hline\end{array}$

Responses	Percent
17	96
16	1
18	1
72	1
15	*
Other	1
Missing	1

Item 1.1.5: (5) $\begin{array}{r}8\\+5\\\hline\end{array}$

Responses	Percent
13	96
42	1
14	1
12	1
17	*
Other	1
Missing	1

Item 1.1.6: (6) $\begin{array}{r}7\\+6\\\hline\end{array}$

Responses	Percent
13	96
40	1
12	1
14	1
17	*
Other	1
Missing	1

Item 1.1.7: (7) $\begin{array}{r}11\\-6\\\hline\end{array}$

Responses	Percent
5	94
4	1
6	1
15	1
17	*
Other	2
Missing	1

Item 1.1.8: (8) $\begin{array}{r}14\\-8\\\hline\end{array}$

Responses	Percent
6	91
7	2
5	2
8	1
4	1
Other	2
Missing	1

Item 1.1.9: (9) $\begin{array}{r}13\\-4\\\hline\end{array}$

Responses	Percent
9	92
8	2
11	1
10	1
7	1
Other	2
Missing	2

Item 1.1.10: (10) $\begin{array}{r}18\\-9\\\hline\end{array}$

Responses	Percent
9	92
8	2
10	1
11	1
7	1
Other	2
Missing	2

Item 1.1.11: (11) $\begin{array}{r}12\\-5\\\hline\end{array}$

Responses	Percent
7	92
8	2
6	2
13	1
17	1
Other	1
Missing	2

Item 1.1.12: (12) $\begin{array}{r}16\\-8\\\hline\end{array}$

Responses	Percent
8	92
7	1
6	1
12	1
2	*
Other	3
Missing	3

* indicates $<0.5\%$

Grade/Year 4 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Mastery of Number Facts (continued)

Item 1.1.13:(13) 7 x 3

Responses	Percent
21	93
20	*
27	*
28	*
12	*
Other	3
Missing	3

Item 1.1.14:(14) 4 x 6

Responses	Percent
24	91
18	*
23	*
20	*
32	*
Other	4
Missing	5

Item 1.1.15:(15) 5 x 5

Responses	Percent
25	95
10	1
35	*
30	*
75	*
Other	1
Missing	3

Item 1.1.16:(16) 8 x 4

Responses	Percent
32	86
36	1
24	1
16	*
28	1
Other	4
Missing	6

Item 1.1.17:(17) 5 x 9

Responses	Percent
45	90
40	1
14	1
63	*
35	*
Other	3
Missing	6

Item 1.1.18:(18) 8 x 6

Responses	Percent
48	74
46	1
42	1
54	1
56	1
Other	8
Missing	13

Item 1.1.19:(19) 3)18

Responses	Percent
6	80
5	1
9	1
7	1
2	*
Other	3
Missing	13

Item 1.1.20:(20) 9)27

Responses	Percent
3	78
4	1
6	*
7	*
2	1
Other	2
Missing	16

Item 1.1.21:(21) 5)45

Responses	Percent
9	81
8	1
7	*
1	*
90	*
Other	2
Missing	16

Item 1.1.22:(22) 7)35

Responses	Percent
5	76
4	1
7	1
6	1
3	*
Other	1
Missing	19

Item 1.1.23:(23) 4)28

Responses	Percent
7	70
6	3
8	2
9	1
3	*
Other	2
Missing	21

Item 1.1.24:(24) 6)36

Responses	Percent
6	75
7	1
4	*
10	*
5	1
Other	2
Missing	21

* indicates <0.5%

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Addition of Whole Numbers

Reporting Category	N	Mean % Correct
Total	35,277	89
11 years or older	1,686	81
10 years	10,987	87
9 years	20,768	88
8 years or younger	1,480	87
Born January-March in 1967	7,104	90
Born April-September in 1967	14,462	89
Born October-December in 1967	5,876	88
Males	18,046	86
Females	17,053	89
One school attended	15,694	88
Two schools attended	10,021	88
Three schools attended	4,944	86
Four or more schools attended	3,974	86
Born in Canada	26,215	88
Not born in Canada	4,389	88
2 years or less in Canada	1,012	87
3 years in Canada	704	89
4 years or more in Canada	2,466	88
English spoken before Grade 1	28,480	88
Other language spoken before Grade 1	5,977	87
English usually spoken in the home	29,596	88
Other language usually spoken in the home	5,235	86

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Addition of Whole Numbers (continued)

Reporting Category	N	Mean % Correct
Non-Canadian, Non-English	1,351	89
Canadian, Non-English	1,269	89
1st Generation Canadian	1,454	85
Non-Canadian, English	1,878	88
Canadian, English	20,823	88
Have used a hand-held calculator	26,360	88
Have never used a hand-held calculator	8,239	86
Use a hand-held calculator at home	17,615	88
Do not use a hand-held calculator at home	17,164	87
Use a hand-held calculator for homework	4,547	86
Do not use a hand-held calculator for homework	30,418	88
Use a hand-held calculator in school	1,091	85
Do not use a hand-held calculator in school	33,827	88
Do not usually watch T.V.	1,396	86
Watch T.V. less than 1 hour/day	1,383	85
Watch T.V. about 1 hour/day	2,786	88
Watch T.V. about 2 hours/day	5,759	88
Watch T.V. about 3 hours/day	6,791	88
Watch T.V. about 4 hours/day	5,949	88
Watch T.V. about 5 hours or more/day	10,902	87

Grade/Year 4 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Addition of Whole Numbers

Item 1.2.1: (26)

Add:

$$\begin{array}{r} 185 \\ +\,412 \\ \hline \end{array}$$

Responses	Percent
597	92
373	2
577	*
587	*
73	1
Other	3
Missing	1

Item 1.2.2: (28)

Add:

$$\begin{array}{r} \$\ 3.06 \\ 10.00 \\ 9.14 \\ +\,5.10 \\ \hline \end{array}$$

Responses	Percent
$27.30	52
27.30	28
$17.30	2
17.30	2
Other with $	7
Other w/o $	7
Missing	2

Item 1.2.3: (29)

Add:

$$\begin{array}{r} 16 \\ +\,7 \\ \hline \end{array}$$

Responses	Percent
23	90
9	2
22	1
13	1
93	1
Other	4
Missing	*

Item 1.2.4: (32)

Add:

$56 + 37 =$ ____

Responses	Percent
93	84
813	2
19	1
92	1
94	1
83	1
Other	8
Missing	2

Item 1.2.5: (38)

Add:

$$\begin{array}{r} 429 \\ 35 \\ +\,531 \\ \hline \end{array}$$

Responses	Percent
995	89
985	1
1025	1
994	1
9815	*
Other	5
Missing	2

* < indicates 0.5%

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Subtraction of Whole Numbers

Reporting Category	N	Mean % Correct
Total	35,277	75
11 years or older	1,686	63
10 years	10,987	74
9 years	20,768	77
8 years or younger	1,480	74
Born January-March in 1967	7,104	79
Born April-September in 1967	14,462	77
Born October-December in 1967	5,876	76
Males	18,046	73
Females	17,053	77
One school attended	15,694	77
Two schools attended	10,021	75
Three schools attended	4,944	74
Four or more schools attended	3,974	70
Born in Canada	26,215	76
Not born in Canada	4,389	76
2 years or less in Canada	1,012	76
3 years in Canada	704	77
4 years or more in Canada	2,466	76
English spoken before Grade 1	28,480	75
Other language spoken before Grade 1	5,977	75
English usually spoken in the home	29,596	75
Other language usually spoken in the home	5,235	74

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Subtraction of Whole Numbers (continued)

Reporting Category	N	Mean % Correct
Non-Canadian, Non-English	1,351	80
Canadian, Non-English	1,269	78
1st Generation Canadian	1,454	70
Non-Canadian, English	1,878	74
Canadian, English	20,823	77
Have used a hand-held calculator	26,360	76
Have never used a hand-held calculator	8,239	72
Use a hand-held calculator at home	17,615	76
Do not use a hand-held calculator at home	17,164	74
Use a hand-held calculator for homework	4,547	72
Do not use a hand-held calculator for homework	30,418	76
Use a hand-held calculator in school	1,091	72
Do not use a hand-held calculator in school	33,827	75
Do not usually watch T.V.	1,396	74
Watch T.V. less than 1 hour/day	1,383	71
Watch T.V. about 1 hour/day	2,786	75
Watch T.V. about 2 hours/day	5,759	76
Watch T.V. about 3 hours/day	6,791	77
Watch T.V. about 4 hours/day	5,949	77
Watch T.V. about 5 hours or more/day	10,902	74

Grade/Year 4 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Subtraction of Whole Numbers

Item 1.3.1: (25)

Subtract:

485
− 34

Responses	Percent
451	90
51	2
461	1
519	1
151	1
Other	5
Missing	1

Item 1.3.4: (36)

Subtract:

1054
- 865

Responses	Percent
189	56
1811	6
1189	2
289	4
199	3
89	3
889	2
1011	1
179	1
Other	18
Missing	4

Item 1.3.2: (30)

Subtract:

36
- 19

Responses	Percent
17	72
23	8
55	6
15	2
16	1
27	2
20	1
Other	7
Missing	2

Item 1.3.5: (39)

Subtract:

95 − 57 = ______

Responses	Percent
38	69
42	10
37	1
48	2
36	1
Other	12
Missing	5

Item 1.3.3: (33)

Subtract:

627
- 500

Responses	Percent
127	87
1127	4
100	5
177	*
120	*
Other	2
Missing	2

* indicates 0.5%

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Notation and Terminology

Reporting Category	N	Mean % Correct
Total	35,277	75
11 years or older	1,686	61
10 years	10,987	74
9 years	20,768	77
8 years or younger	1,480	74
Born January-March in 1967	7,104	79
Born April-September in 1967	14,462	77
Born October-December in 1967	5,876	76
Males	18,046	76
Females	17,053	74
One school attended	15,694	77
Two schools attended	10,021	75
Three schools attended	4,944	72
Four or more schools attended	3,974	70
Born in Canada	26,215	76
Not born in Canada	4,389	73
2 years or less in Canada	1,012	69
3 years in Canada	704	72
4 years or more in Canada	2,466	76
English spoken before Grade 1	28,480	76
Other language spoken before Grade 1	5,977	73
English usually spoken in the home	29,596	76
Other language usually spoken in the home	5,235	70

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Notation and Terminology (continued)

Reporting Category	N	Mean % Correct
Non-Canadian, Non-English	1,351	72
Canadian, Non-English	1,269	76
1st Generation Canadian	1,454	68
Non-Canadian, English	1,878	75
Canadian, English	20,823	77
Have used a hand-held calculator	26,360	77
Have never used a hand-held calculator	8,239	70
Use a hand-held calculator at home	17,615	77
Do not use a hand-held calculator at home	17,164	73
Use a hand-held calculator for homework	4,547	74
Do not use a hand-held calculator for homework	30,418	75
Use a hand-held calculator in school	1,091	73
Do not use a hand-held calculator in school	33,827	75
Do not usually watch T.V.	1,396	74
Watch T.V. less than 1 hour/day	1,383	71
Watch T.V. about 1 hour/day	2,786	75
Watch T.V. about 2 hours/day	5,759	76
Watch T.V. about 3 hours/day	6,791	77
Watch T.V. about 4 hours/day	5,949	77
Watch T.V. about 5 hours or more/day	10,902	74

Grade/Year 4 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Notation and Terminology

Item 1.4.1: (48)

Which is true?

	Percent
35 > 45	12
35 = 45	1
45 = 35	2
35 < 45	76
I don't know	7
Missing	1
Multiple	1

Item 1.4.2: (49)

Which is an odd number?

	Percent
38	11
45	67
42	6
36	8
I don't know	7
Missing	1
Multiple	1

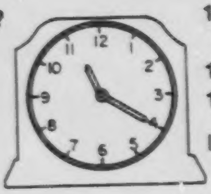
Item 1.4.3: (51)

Which says three dollars and 26 cents?

	Percent
$300.26	8
$ 30.26	1
$ 3.26	88
$326.00	1
I don't know	*
Missing	1
Multiple	*

Item 1.4.4: (56)

What time does this clock show?



	Percent
11:40	7
4:00	1
11:20	88
12:20	1
I don't know	1
Missing	*
Multiple	*

* indicates <0.5%

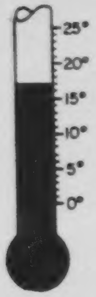
Grade/Year 4 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Notation and Terminology

Item 1.4.5: (57)

What temperature does this thermometer show:



	Percent
20°	1
17°	81
23°	2
15°	15
I don't know .	1
Missing	*
Multiple	*

Item 1.4.6: (63)

5 metres is the same length as:

	Grade 4	Grade 8	Grade 12
50 centimetres .	27	13	15
500 centimetres .	49	69	63
50 millimetres . .	10	5	4
500 millimetres . .	4	5	4
I don't know	7	7	13
Missing	3	1	1
Multiple	*	*	*

* indicates <0.5%

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.1: Place Value Concepts

Reporting Category	N	Mean % Correct
Total	35,277	78
11 years or older	1,686	64
10 years	10,987	77
9 years	20,768	80
8 years or younger	1,480	78
Born January-March in 1967	7,104	82
Born April-September in 1967	14,462	80
Born October-December in 1967	5,876	79
Males	18,046	78
Females	17,053	78
One school attended	15,694	80
Two schools attended	10,021	79
Three schools attended	4,944	76
Four or more schools attended	3,974	74
Born in Canada	26,215	80
Not born in Canada	4,389	76
2 years or less in Canada	1,012	74
3 years in Canada	704	76
4 years or more in Canada	2,466	79
English spoken before Grade 1	28,480	79
Other language spoken before Grade 1	5,977	76
English usually spoken in the home	29,596	79
Other language usually spoken in the home	5,235	74

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.1: Place Value Concepts (continued)

Reporting Category	N	Mean % Correct
Non-Canadian, Non-English	1,351	76
Canadian, Non-English	1,269	78
1st Generation Canadian	1,454	73
Non-Canadian, English	1,878	79
Canadian, English	20,823	80
Have used a hand-held calculator	26,360	80
Have never used a hand-held calculator	8,239	73
Use a hand-held calculator at home	17,615	80
Do not use a hand-held calculator at home	17,164	77
Use a hand-held calculator for homework	4,547	77
Do not use a hand-held calculator for homework	30,418	78
Use a hand-held calculator in school	1,091	75
Do not use a hand-held calculator in school	33,827	78
Do not usually watch T.V.	1,396	78
Watch T.V. less than 1 hour/day	1,383	74
Watch T.V. about 1 hour/day	2,786	78
Watch T.V. about 2 hours/day	5,759	79
Watch T.V. about 3 hours/day	6,791	80
Watch T.V. about 4 hours/day	5,949	80
Watch T.V. about 5 hours or more/day	10,902	77

Grade/Year 4 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.1: Place Value Concepts

Item 2.1.1: (35)

Multiply:

53 x 100 = ______

Responses	Percent
5300	61
153	5
530	4
100	3
500	3
800	2
53000	2
5000	1
Other	11
Missing	8

Item 2.1.2: (44)

Counting by tens, which number comes next?
243, 253, 263, ______

273	91
264	3
363	1
73	1
I don't know	2
Missing	1
Multiple	*

Item 2.1.3: (45)

The 2 in 2645 means:

	Grade 4	Grade 8
2 hundreds ...	3	1
2 thousands ..	88	90
2 ones	1	2
2 millions	5	4
I don't know ...	2	1
Missing	1	*
Multiple	*	*

Item 2.1.4: (46)

Round off 43 to the nearest ten.

	Percent
30	8
50	11
40	59
44	14
I don't know ..	8
Missing	1
Multiple	*

* indicates < 0.5%

Grade/Year 4 - Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.1: Place Value Concepts (continued)

Item 2.1.5: (47)

Which number is largest?		Percent
	3176	13
	2988	7
	3206	79
	I don't know ..	1
	Missing	1
	Multiple	*

Item 2.1.6: (50)

Which says three hundred seven?		Percent
	37	1
	370	3
	307	91
	3007	4
	I don't know ..	*
	Missing	1
	Multiple	*

* indicates <0.5%

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.2: Number Properties

Reporting Category	N	Mean % Correct
Total	35,277	90
11 years or older	1,686	83
10 years	10,987	90
9 years	20,768	92
8 years or younger	1,480	91
Born January-March in 1967	7,104	92
Born April-September in 1967	14,462	92
Born October-December in 1967	5,876	91
Males	18,046	90
Females	17,053	91
One school attended	15,694	91
Two schools attended	10,021	91
Three schools attended	4,944	90
Four or more schools attended	3,974	88
Born in Canada	26,215	91
Not born in Canada	4,389	90
2 years or less in Canada	1,012	89
3 years in Canada	704	91
4 years or more in Canada	2,466	91
English spoken before Grade 1	28,480	91
Other language spoken before Grade 1	5,977	90
English usually spoken in the home	29,596	91
Other language usually spoken in the home	5,235	90

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.2: Number Properties (continued)

Reporting Category	N	Mean % Correct
Non-Canadian, Non-English	1,351	92
Canadian, Non-English	1,269	92
1st Generation Canadian	1,454	88
Non-Canadian, English	1,878	90
Canadian, English	20,823	91
Have used a hand-held calculator	26,360	91
Have never used a hand-held calculator	8,239	89
Use a hand-held calculator at home	17,615	91
Do not use a hand-held calculator at home	17,164	90
Use a hand-held calculator for homework	4,547	90
Do not use a hand-held calculator for homework	30,418	91
Use a hand-held calculator in school	1,091	89
Do not use a hand-held calculator in school	33,827	90
Do not usually watch T.V.	1,396	90
Watch T.V. less than 1 hour/day	1,383	89
Watch T.V. about 1 hour/day	2,786	90
Watch T.V. about 2 hours/day	5,759	91
Watch T.V. about 3 hours/day	6,791	91
Watch T.V. about 4 hours/day	5,949	91
Watch T.V. about 5 hours or more/day	10,902	90

Grade/Year 4 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.2: **Number** Properties

Item 2.2.1: (27)

Multiply:

43 x 0 = ______

Responses	Percent
0	90
43	9
430	1
120	*
437	*
Other	*
Missing	1

Item 2.2.2: (31)

Put the missing number in the box: ☐ - 3 = 7

10	81
4	13
9	1
11	1
5	*
Other	1
Missing	2

Item 2.2.3: (34)

Add:

87 + 0 = ______

87	95
0	4
80	*
870	*
89	*
Other	*
Missing	1

Item 2.2.4: (37)

Multiply:

37 x 1 = ______

37	95
38	1
1	*
74	*
371	*
Other	2
Missing	1

* indicates <0.5%

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.3: Measurement Concepts

Reporting Category	N	Mean % Correct
Total	35,277	53
11 years or older	1,686	43
10 years	10,987	53
9 years	20,768	55
8 years or younger	1,480	51
Born January-March in 1967	7,104	57
Born April-September in 1967	14,462	55
Born October-December in 1967	5,876	53
Males	18,046	54
Females	17,053	52
One school attended	15,694	55
Two schools attended	10,021	54
Three schools attended	4,944	52
Four or more schools attended	3,974	50
Born in Canada	26,215	54
Not born in Canada	4,389	52
2 years or less in Canada	1,012	51
3 years in Canada	704	51
4 years or more in Canada	2,466	54
English spoken before Grade 1	28,480	54
Other language spoken before Grade 1	5,977	52
English usually spoken in the home	29,596	54
Other language usually spoken in the home	5,235	50

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.3: Measurement Properties (continued)

Reporting Category	N	Mean % Correct
Non-Canadian, Non-English	1,351	53
Canadian, Non-English	1,269	54
1st Generation Canadian	1,454	48
Non-Canadian, English	1,878	52
Canadian, English	20,823	55
Have used a hand-held calculator	26,360	55
Have never used a hand-held calculator	8,239	49
Use a hand-held calculator at home	17,615	55
Do not use a hand-held calculator at home	17,164	52
Use a hand-held calculator for homework	4,547	52
Do not use a hand-held calculator for homework	30,418	54
Use a hand-held calculator in school	1,091	54
Do not use a hand-held calculator in school	33,827	53
Do not usually watch T.V.	1,396	53
Watch T.V. less than 1 hour/day	1,383	52
Watch T.V. about 1 hour/day	2,786	54
Watch T.V. about 2 hours/day	5,759	55
Watch T.V. about 3 hours/day	6,791	55
Watch T.V. about 4 hours/day	5,949	54
Watch T.V. about 5 hours or more/day	10,902	51

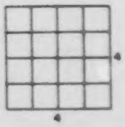
Grade/Year 4 - Test Results by Item

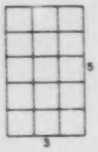
DOMAIN 2: COMPREHENSION

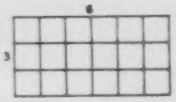
Objective 2.3: Measurement Properties

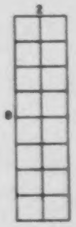
Item 2.3.1: (59)

Which one of the figures below has the same area as the figure on the right?





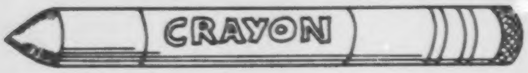




			I don't know	Missing	Multiple
17%	6%	61%	13%	3%	1%

Item 2.3.2: (61)

About how long is this crayon?



	Grade 4	Grade 8	Grade 12
1 centimetre ...	4	2	3
10 centimetres ..	81	84	82
1 metre	5	6	4
10 metres	5	4	4
I don't know	4	3	7
Missing	1	1	1
Multiple	*	*	*

Item 2.3.3: (62)

A milk jug is likely to hold:

	Grade 4	Grade 8	Grade 12
1 millilitre	6	2	1
10 millilitres ...	10	5	2
1 litre	67	84	90
100 litres	7	4	2
I don't know	8	4	4
Missing	2	1	1
Multiple	*	1	*

* indicates <0.5%

Grade/Year 4 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.3: Measurement Properties (continued)

Item 2.3.4: (64)

A ten-year-old boy is likely to weigh:

	Grade 4	Grade 8	Grade 12
35 grams	9	10	3
75 grams	22	13	6
35 kilograms ...	25	45	54
75 kilograms ...	33	19	19
I don't know ...	8	12	17
Missing	2	1	1
Multiple	*	1	*

Item 2.3.5: (65)

The temperature on a sunny summer day would most likely be:

	Grade 4	Grade 8	Grade 12
5° Celsius	5	5	3
25° Celsius	32	69	87
55° Celsius	27	12	5
85° Celsius	29	9	3
I don't know	6	4	2
Missing	1	1	1
Multiple	*	*	*

* indicates < 0.5%

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.4: Fraction Concepts

Reporting Category	N	Mean % Correct
Total	35,277	57
11 years or older	1,686	43
10 years	10,987	56
9 years	20,768	59
8 years or younger	1,480	56
Born January-March in 1967	7,104	63
Born April-September in 1967	14,462	60
Born October-December in 1967	5,876	57
Males	18,046	57
Females	17,053	57
One school attended	15,694	59
Two schools attended	10,021	58
Three schools attended	4,944	54
Four or more schools attended	3,974	52
Born in Canada	26,215	59
Not born in Canada	4,389	55
2 years or less in Canada	1,012	54
3 years in Canada	704	56
4 years or more in Canada	2,466	57
English spoken before Grade 1	28,480	58
Other language spoken before Grade 1	5,977	54
English usually spoken in the home	29,596	58
Other language usually spoken in the home	5,235	50

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.4: Fraction Concepts (continued)

Reporting Category	N	Mean % Correct
Non-Canadian, Non-English	1,351	53
Canadian, Non-English	1,269	55
1st Generation Canadian	1,454	49
Non-Canadian, English	1,878	59
Canadian, English	20,823	60
Have used a hand-held calculator	26,360	59
Have never used a hand-held calculator	8,239	51
Use a hand-held calculator at home	17,615	59
Do not use a hand-held calculator at home	17,164	55
Use a hand-held calculator for homework	4,547	55
Do not use a hand-held calculator for homework	30,418	58
Use a hand-held calculator in school	1,091	57
Do not use a hand-held calculator in school	33,827	57
Do not usually watch T.V.	1,396	59
Watch T.V. less than 1 hour/day	1,383	53
Watch T.V. about 1 hour/day	2,786	57
Watch T.V. about 2 hours/day	5,759	59
Watch T.V. about 3 hours/day	6,791	59
Watch T.V. about 4 hours/day	5,949	58
Watch T.V. about 5 hours or more/day	10,902	55

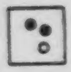
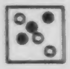
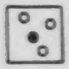
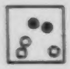
Grade/Year 4 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.4: Fraction Concepts

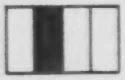
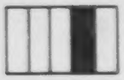
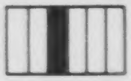
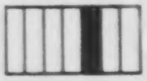
Item 2.4.1: (58)

Which group of dots is one-half ($\frac{1}{2}$) shaded?

				I don't know	Missing	Multiple
21%	60%	8%	2%	7%	2%	1%

Item 2.4.2: (60)

Which box is one-fifth ($\frac{1}{5}$) shaded?

				I don't know	Missing	Multiple
7%	54%	15%	17%	5%	1%	*%

* indicates <0.5%

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATION

Objective 3.1: Social Applications

Reporting Category	N	Mean % Correct
Total	35,277	78
11 years or older	1,686	64
10 years	10,987	77
9 years	20,768	80
8 years or younger	1,480	79
Born January-March in 1967	7,104	81
Born April-September in 1967	14,462	80
Born October-December in 1967	5,876	79
Males	18,046	79
Females	17,053	77
One school attended	15,694	80
Two schools attended	10,021	78
Three schools attended	4,944	76
Four or more schools attended	3,974	76
Born in Canada	26,215	79
Not born in Canada	4,389	76
2 years or less in Canada	1,012	72
3 years in Canada	704	77
4 years or more in Canada	2,466	78
English spoken before Grade 1	28,480	79
Other language spoken before Grade 1	5,977	75
English usually spoken in the home	29,596	79
Other language usually spoken in the home	5,235	73

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATION

Objective 3.1: Social Applications (continued)

Reporting Category	N	Mean % Correct
Non-Canadian, Non-English	1,351	75
Canadian, Non-English	1,269	77
1st Generation Canadian	1,454	73
Non-Canadian, English	1,878	79
Canadian, English	20,823	80
Have used a hand-held calculator	26,360	80
Have never used a hand-held calculator	8,239	74
Use a hand-held calculator at home	17,615	80
Do not use a hand-held calculator at home	17,164	77
Use a hand-held calculator for homework	4,547	77
Do not use a hand-held calculator for homework	30,418	78
Use a hand-held calculator in school	1,091	77
Do not use a hand-held calculator in school	33,827	78
Do not usually watch T.V.	1,396	76
Watch T.V. less than 1 hour/day	1,383	74
Watch T.V. about 1 hour/day	2,786	78
Watch T.V. about 2 hours/day	5,759	79
Watch T.V. about 3 hours/day	6,791	79
Watch T.V. about 4 hours/day	5,949	80
Watch T.V. about 5 hours or more/day	10,902	78

Grade/Year 4 - Test Results by Item

DOMAIN 3: APPLICATIONS

Objective 3.1: Social Applications

Item 3.1.1: (40)

Funland opened on May 16. Jerry and Teresa were there one week later. On what date were they there?

	Percent
May 17	5
May 21	7
May 22	6
May 23	77
I don't know .	4
Missing	1
Multiple	*

Item 3.1.2: (42)

Teresa and Jerry played Bingo from 4:25 p.m. until 5:00 p.m. For how many minutes did they play Bingo?

	Percent
95	8
25	14
35	49
75	20
I don't know ...	8
Missing	1
Multiple	*

Item 3.1.3: (43)

Jerry has 2 nickels, 1 quarter, and 4 pennies. How much money does he have in all?

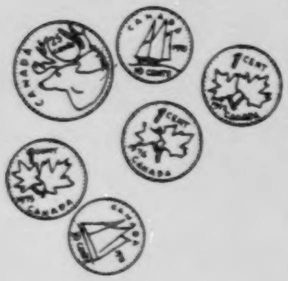
	Percent
39 cents	82
7 cents	7
24 cents	1
34 cents	6
I don't know ..	2
Missing	1
Multiple	*

* indicates < 0.5%

DOMAIN 3: APPLICATIONS

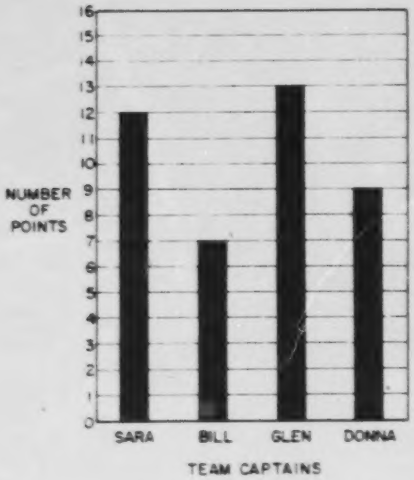
Objective 3.1: Social Applications (continued)

Item 3.1.4: (55) **What is the total value of these coins?**



	Percent
43¢	3
38¢	3
75¢	6
48¢	86
I don't know ...	1
Missing	*
Multiple	*

Item 3.1.5: (66)



How many more points did Sara's team score than Donna's team?

4	1
21	92
3	3
12	1
I don't know ...	1
Missing	1
Multiple	*

* indicates > 0.5%

Grade/Year 4 - Test Results by Item

DOMAIN 3: APPLICATIONS

Objective 3.1: Social Applications (continued)

Item 3.1.6: (69)

Whose team came last?

	Percent
Sara's team....	7
Bill's team.....	2
Glen's team....	82
Donna's team ..	7
I don't know ...	1
Missing	1
Multiple	*

* indicates < 0.5%

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.2: Mathematical Applications

Reporting Category	N	Mean % Correct
Total	35,277	65
11 years or older	1,686	48
10 years	10,987	64
9 years	20,768	67
8 years or younger	1,480	64
Born January-March in 1967	7,104	70
Born April-September in 1967	14,462	68
Born October-December in 1967	5,876	66
Males	18,046	66
Females	17,053	64
One school attended	15,694	67
Two schools attended	10,021	66
Three schools attended	4,944	63
Four or more schools attended	3,974	60
Born in Canada	26,215	67
Not born in Canada	4,389	64
2 years or less in Canada	1,012	62
3 years in Canada	704	66
4 years or more in Canada	2,466	65
English spoken before Grade 1	28,480	66
Other language spoken before Grade 1	5,977	62
English usually spoken in the home	29,596	66
Other language usually spoken in the home	5,235	59

Grade/Year 4 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.2: Mathematical Applications (continued)

Reporting Category	N	Mean % Correct
Non-Canadian, Non-English	1,351	64
Canadian, Non-English	1,269	65
1st Generation Canadian	1,454	57
Non-Canadian, English	1,878	66
Canadian, English	20,823	68
Have used a hand-held calculator	26,360	67
Have never used a hand-held calculator	8,239	59
Use a hand-held calculator at home	17,615	67
Do not use a hand-held calculator at home	17,164	64
Use a hand-held calculator for homework	4,547	62
Do not use a hand-held calculator for homework	30,418	66
Use a hand-held calculator in school	1,091	63
Do not use a hand-held calculator in school	33,827	65
Do not usually watch T.V.	1,396	64
Watch T.V. less than 1 hour/day	1,383	60
Watch T.V. about 1 hour/day	2,786	65
Watch T.V. about 2 hours/day	5,759	66
Watch T.V. about 3 hours/day	6,791	67
Watch T.V. about 4 hours/day	5,949	67
Watch T.V. about 5 hours or more/day	10,902	63

Grade/Year 4 - Test Results by Item

DOMAIN 3: APPLICATIONS

Objective 3.2: Mathematical Applications

Item 3.2.1: (41)

The roller coaster has 8 cars with 4 wheels on each car. How many wheels are there on the roller coaster?

	Percent
12	12
2	1
32	79
24	4
I don't know	2
Missing	1
Multiple	*

Item 3.2.2: (52)

Skana can jump 627 centimetres high. Hyak can jump 5 metres high. How much higher can Skana jump than Hyak?

127 centimetres	39
622 centimetres	23
22 centimetres	14
632 centimetres	8
I don't know	15
Missing	1
Multiple	*

Item 3.2.3: (53)

On Monday, 185 people saw the morning whale shows and 412 people saw the afternoon whale shows. How many people saw the whale shows that day?

597	88
697	4
327	2
373	2
I don't know	3
Missing	1
Multiple	*

* indicates $<0.5\%$

Grade/Year 4 - Test Results by Item

DOMAIN 3: APPLICATIONS

Objective 3.2: Mathematical Applications (continued)

Item 3.2.4: (54)

Yesterday, Skana ate a total of 98 fish in three meals. She ate 32 fish at the first meal and 25 fish at the second meal. How many fish did she eat for her third meal?

	Percent
66	4
41	60
155	15
57	12
I don't know ..	7
Missing	1
Multiple	*

Item 3.2.5: (66)

Sam has 51 pop bottles and 8 cartons. Each carton holds 6 bottles.

If Sam fills all the cartons, how many bottles will be left over?

	Percent
6	8
8	10
3	47
14	24
I don't know ..	10
Missing	1
Multiple	*

Item 3.2.6: (67)

Sam collected 30 of the bottles. His sister, Marie, collected the rest. How many bottles did Marie collect?

	Percent
18	4
14	6
21	75
44	6
I don't know ...	7
Missing	1
Multiple	*

* indicates <0.5%

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 1: COMPUTATION AND KNOWLEDGE

Objective 1.1: Computation with Whole Numbers

Reporting Category	N	Mean % Correct
Total	42,250	84
16 years or older	440	67
15 years	2,344	75
14 years	14,237	82
13 years	24,075	86
12 years or younger	757	82
Males	21,470	81
Females	20,162	87
One school attended	1,367	80
Two schools attended	12,479	85
Three schools attended	11,124	85
Four schools attended	6,970	84
Five schools attended	4,055	83
Six schools attended	2,236	83
Seven schools attended	1,291	80
Eight or more schools attended	1,920	78
Use a hand-held calculator at home	14,840	84
Do not use a hand-held calculator at home	26,524	84
Use a hand-held calculator for homework	12,214	83
Do not use a hand-held calculator for homework	29,069	85
Use a hand-held calculator in school	4,295	79
Do not use a hand-held calculator in school	37,581	84
Mathematics course semestered	12,865	83
Mathematics course not semestered	28,799	84

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 1: COMPUTATION AND KNOWLEDGE

Objective 1.1: Computation with Whole Numbers (continued)

Reporting Category	N	Mean % Correct
No time spent on mathematics assignments	5,539	79
Less than 30 minutes/day spent on mathematics assignments	23,346	86
30 - 60 minutes/day spent on mathematics assignments	10,802	84
More than an hour/day spent on mathematics assignments	1,237	77
Born in Canada	22,792	85
Not born in Canada	3,394	86
2 years or less in Canada	511	85
3 - 4 years in Canada	508	87
5 years or more in Canada	2,226	86
English spoken before Grade 1	22,619	85
Other language spoken before Grade 1	4,253	86
English usually spoken in the home	25,055	85
Other language usually spoken in the home	2,558	86
Non-Canadian, Non-English	836	88
Canadian, Non-English	764	88
1st generation Canadian	598	82
Non-Canadian, English	1,745	85
Canadian, English	18,813	85
Do not usually watch T.V.	899	83
Watch T.V. less than 1 hour/day	863	86
Watch T.V. about 1 hour/day	2,144	86
Watch T.V. about 2 hours/day	5,247	86
Watch T.V. about 3 hours/day	6,401	86
Watch T.V. about 4 hours/day	5,382	85
Watch T.V. about 5 hours or more/day	6,703	83

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Computation with Whole numbers (continued)

Reporting Category	N	Mean % Correct
Usually read a newspaper every day	7,188	86
Read a newspaper 3 - 4 times/week	6,404	86
Read a newspaper once/week	6,470	86
Read a newspaper once/month	1,312	85
Hardly ever read a newspaper	6,250	83
Hardly ever read magazine articles	7,592	84
Read magazine articles once/month	4,895	87
Read magazine articles once or twice/week	10,207	86
Read magazine articles 3 - 4 times/week	4,885	83
Read 0 - 2 books/year	3,096	79
Read 3 - 5 books/year	4,391	84
Read 6 - 8 books/year	4,057	84
Read 1 book/month	4,682	86
Read 2 books/month	5,277	87
Read 1 book/week	3,230	87
Read more than 1 book/week	2,860	86

Grade/Year 8 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Computation with Whole Numbers

Item 1.1.1: (4)

Add:

$$\begin{array}{r} 429 \\ 35 \\ \underline{531} \end{array}$$

	Percent
A) 9815	1
B) 995	93
C) 595	1
D) 985	3
E) I don't know	1
Missing	1
Multiple	*

Item 1.1.2: (8)

Divide: $45 \overline{)\ 1232}$

A) 25 remainder 7	9
B) 27 remainder 17	70
C) 29 remainder 27	9
D) 207 remainder 17	4
E) I don't know	7
Missing	1
Multiple	1

Item 1.1.3: (16)

Subtract:

$$\begin{array}{r} 1054 \\ -\ \underline{865} \end{array}$$

A) 1919	1
B) 289	6
C) 189	89
D) 211	[illegible]
E) I don't know	1
Missing	1
Multiple	*

Item 1.1.4: (32)

Add:

$$\begin{array}{r} \$\ \ 3.06 \\ 10.00 \\ 9.14 \\ \underline{5.10} \end{array}$$

	Percent
A) $ 17.30	4
B) $2730.00	3
C) $ 27.20	4
D) $ 27.30	88
E) I don't know	1
Missing	1
Multliple	*

Item 1.1.5: (49)

Multiply:

$$\begin{array}{r} 403 \\ \times\ \underline{59} \end{array}$$

A) 24 337	6
B) 5 642	5
C) 23 777	79
D) 3 627	5
E) I don't know	3
Missing	1
Multiple	*

* indicates <0.5%

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Computation with Rational Numbers in Fraction Form

Reporting Category	N	Mean % Correct
Total	42,250	68
16 years or older	440	43
15 years	2,344	52
14 years	14,237	66
13 years	24,075	72
12 years or younger	757	68
Males	21,470	65
Females	20,162	73
One school attended	1,367	64
Two schools attended	12,479	72
Three schools attended	11,124	70
Four schools attended	6,970	68
Five schools attended	4,055	67
Six schools attended	2,236	66
Seven schools attended	1,291	62
Eight or more schools attended	1,920	59
Use a hand-held calculator at home	14,840	70
Do not use a hand-held calculator at home	26,524	68
Use a hand-held calculator for homework	12,214	68
Do not use a hand-held calculator for homework	29,069	69
Use a hand-held calculator in school	4,295	63
Do not use a hand-held calculator in school	37,581	69
Mathematics course semestered	12,865	68
Mathematics course not semestered	28,799	69

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Computation with Rational Numbers in Fraction Form (continued)

Reporting Category	N	Mean % Correct
No time spent on mathematics assignments	5,539	62
Less than 30 minutes/day spent on mathematics assignments	23,346	71
30 - 60 minutes/day spent on mathematics assignments	10,802	69
More than an hour/day spent on mathematics assignments	1,237	59
Born in Canada	22,792	70
Not born in Canada	3,394	72
2 years or less in Canada	511	70
3 - 4 years in Canada	508	72
5 years or more in Canada	2,226	72
English spoken before Grade 1	22,619	70
Other language spoken before Grade 1	4,253	72
English usually spoken in the home	25,055	70
Other language usually spoken in the home	2,558	70
Non-Canadian, Non-English	836	74
Canadian, Non-English	764	75
1st generation Canadian	598	64
Non-Canadian, English	1,745	71
Canadian, English	18,813	71
Do not usually watch T.V.	899	70
Watch T.V. less than 1 hour/day	863	73
Watch T.V. about 1 hour/day	2,144	74
Watch T.V. about 2 hours/day	5,247	73
Watch T.V. about 3 hours/day	6,401	71
Watch T.V. about 4 hours/day	5,382	69
Watch T.V. about 5 hours or more/day	6,703	65

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Computation with Rational Numbers in Fraction Form (continued)

Reporting Category	N	Mean % Correct
Usually read a newspaper every day	7,188	72
Read a newspaper 3 - 4 times/week	6,404	72
Read a newspaper once/week	6,470	70
Read a newspaper once/month	1,312	70
Hardly ever read a newspaper	6,250	65
Hardly ever read magazine articles	7,592	67
Read magazine articles once/month	4,895	73
Read magazine articles once or twice/week	10,207	72
Read magazine articles 3 - 4 times/week	4,885	68
Read 0 - 2 books/year	3,096	60
Read 3 - 5 books/year	4,391	67
Read 6 - 8 books/year	4,057	69
Read 1 book/month	4,682	71
Read 2 books/month	5,277	73
Read 1 book/week	3,230	73
Read more than 1 book/week	2,860	74

Grade/Year 8 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Computation with Rational Numbers in Fraction Form

Item 1.2.1: (2)

Add: $\frac{1}{2} + \frac{1}{3} =$

	Grade 8	Grade 12
A) $\frac{2}{5}$	19	9
B) $\frac{1}{5}$	8	2
C) $\frac{1}{6}$	5	2
D) $\frac{5}{6}$	66	86
E) I don't know	1	*
Missing	*	*
Multiple	1	*

Item 1.2.2: (6)

Subtract: $\frac{2}{5} - \frac{1}{3} =$

A) $\frac{5}{6}$	1	1
B) $\frac{1}{15}$	63	86
C) $\frac{1}{2}$	22	7
D) $\frac{11}{15}$	9	5
E) I don't know	2	1
Missing	1	1
Multiple	*	*

Item 1.2.3: (11)

Divide: $\frac{2}{3} \div \frac{5}{7} =$

	Grade 8	Grade 12
A) $\frac{10}{21}$	15	11
B) $\frac{14}{15}$	62	74
C) $\frac{9}{8}$	5	2
D) $\frac{15}{14}$	7	6
E) I don't know	10	5
Missing	1	1
Multiple	1	1

Item 1.2.4: (29)

Multiply: $\frac{3}{4} \times \frac{5}{7} =$

A) $\frac{15}{28}$	82	87
B) $\frac{21}{20}$	6	5
C) $\frac{20}{21}$	6	5
D) $\frac{8}{11}$	1	1
E) I don't know	3	2
Missing	2	*
Multiple	*	*

* indicates <0.5%

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Computation with Rational Numbers in Decimal Form

Reporting Category	N	Mean % Correct
Total	42,250	68
16 years or older	440	46
15 years	2,344	53
14 years	14,237	65
13 years	24,075	71
12 years or younger	757	66
Males	21,470	65
Females	20,162	71
One school attended	1,367	63
Two schools attended	12,479	71
Three schools attended	11,124	69
Four schools attended	6,970	68
Five schools attended	4,055	67
Six schools attended	2,236	66
Seven schools attended	1,291	63
Eight or more schools attended	1,920	59
Use a hand-held calculator at home	14,840	69
Do not use a hand-held calculator at home	26,524	68
Use a hand-held calculator for homework	12,214	67
Do not use a hand-held calculator for homework	29,069	68
Use a hand-held calculator in school	4,295	63
Do not use a hand-held calculator in school	37,581	68
Mathematics course semestered	12,865	67
Mathematics course not semestered	28,799	68

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Computation with Rational Numbers in Decimal Form (continued)

Reporting Category	N	Mean % Correct
No time spent on mathematics assignments	5,539	62
Less than 30 minutes/day spent on mathematics assignments	23,346	70
30 - 60 minutes/day spent on mathematics assignments	10,802	68
More than an hour/day spent on mathematics assignments	1,237	58
Born in Canada	22,792	70
Not born in Canada	3,394	71
2 years or less in Canada	511	69
3 - 4 years in Canada	508	74
5 years or more in Canada	2,226	71
English spoken before Grade 1	22,619	69
Other language spoken before Grade 1	4,253	71
English usually spoken in the home	25,055	69
Other language usually spoken in the home	2,558	70
Non-Canadian, Non-English	836	74
Canadian, Non-English	764	73
1st generation Canadian	598	65
Non-Canadian, English	1,745	70
Canadian, English	18,813	70
Do not usually watch T.V.	899	69
Watch T.V. less than 1 hour/day	863	72
Watch T.V. about 1 hour/day	2,144	73
Watch T.V. about 2 hours/day	5,247	72
Watch T.V. about 3 hours/day	6,401	71
Watch T.V. about 4 hours/day	5,382	69
Watch T.V. about 5 hours or more/day	6,703	65

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Computation with Rational Numbers in Decimal Form (continued)

Reporting Category	N	Mean % Correct
Usually read a newspaper every day	7,188	71
Read a newspaper 3 - 4 times/week	6,404	71
Read a newspaper once/week	6,470	70
Read a newspaper once/month	1,312	70
Hardly ever read a newspaper	6,250	65
Hardly ever read magazine articles	7,592	68
Read magazine articles once/month	4,895	72
Read magazine articles once or twice/week	10,207	70
Read magazine articles 3 - 4 times/week	4,885	66
Read 0 - 2 books/year	3,096	61
Read 3 - 5 books/year	4,391	67
Read 6 - 8 books/year	4,057	68
Read 1 book/month	4,682	71
Read 2 books/month	5,277	72
Read 1 book/week	3,230	72
Read more than 1 book/week	2,860	72

Grade/Year 8 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Computation with Rational Numbers in Decimal Form

Item 1.3.1: (1)

Subtract: 82.1 - 23.8 =

	Grade 8	Grade 12
A) 41.7	4	2
B) 58.3	79	87
C) 49.3	4	3
D) 3.83	11	7
E) I don't know	1	1
Missing	1	1
Multiple	1	*

Item 1.3.2: (5)

Multiply: .15 x .45 =

	Grade 8	Grade 12
A) 6.75	16	11
B) 0.0675	63	78
C) 0.675	13	8
D) 67.5	3	1
E) I don't know	3	1
Missing	1	1
Multiple	*	*

Item 1.3.3: (15)

Add: 5.72 + 18.005 + 7.3 =

	Grade 8	Grade 12
A) 31.025	72	84
B) 30.025	14	9
C) 31.755	6	3
D) 31.007	2	1
E) I don't know	5	1
Missing	*	1
Multiple	*	*

Item 1.3.4: (17)

Subtract: 51.2 - 4.35 =

	Grade 8	Grade 12
A) 46.95	15	9
B) 46.85	66	86
C) 17.7	4	1
D) 7.7	9	2
E) I don't know	4	1
Missing	1	1
Multiple	*	*

Item 1.3.5: (28)

Divide: $.12\overline{)\,.036}$

	Grade 8	Grade 12
A) 3	12	5
B) 0.003	11	13
C) 0.3	58	66
D) 0.03	13	13
E) I don't know	4	2
Missing	1	1
Multiple	*	*

* indicates 0.5%

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Notation and Terminology

Reporting Category	N	Mean % Correct
Total	42,250	71
16 years or older	440	45
15 years	2,344	54
14 years	14,237	68
13 years	24,075	75
12 years or younger	757	72
Males	21,470	70
Females	20,162	72
One school attended	1,367	67
Two schools attended	12,479	74
Three schools attended	11,124	72
Four schools attended	6,970	71
Five schools attended	4,055	69
Six schools attended	2,236	68
Seven schools attended	1,291	66
Eight or more schools attended	1,920	62
Use a hand-held calculator at home	14,840	73
Do not use a hand-held calculator at home	26,524	70
Use a hand-held calculator for homework	12,214	71
Do not use a hand-held calculator for homework	29,069	71
Use a hand-held calculator in school	4,295	68
Do not use a hand-held calculator in school	37,581	71
Mathematics course semestered	12,865	70
Mathematics course not semestered	28,799	71

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I. COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Notation and Terminology (continued)

Reporting Category	N	Mean % Correct
No time spent on mathematics assignments	5,539	65
Less than 30 minutes/day spent on mathematics assignments	23,346	73
30 - 60 minutes/day spent on mathematics assignments	10,802	71
More than an hour/day spent on mathematics assignments	1,237	61
Born in Canada	22,792	72
Not born in Canada	3,394	74
2 years or less in Canada	511	71
3 - 4 years in Canada	508	74
5 years or more in Canada	2,226	75
English spoken before Grade 1	22,619	72
Other language spoken before Grade 1	4,253	73
English usually spoken in the home	25,055	72
Other language usually spoken in the home	2,558	71
Non-Canadian, Non-English	836	75
Canadian, Non-English	764	75
1st generation Canadian	598	66
Non-Canadian, English	1,745	74
Canadian, English	18,813	73
Do not usually watch T.V.	899	72
Watch T.V. less than 1 hour/day	863	77
Watch T.V. about 1 hour/day	2,144	76
Watch T.V. about 2 hours/day	5,247	75
Watch T.V. about 3 hours/day	6,401	73
Watch T.V. about 4 hours/day	5,382	71
Watch T.V. about 5 hours or more/day	6,703	67

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Notation and Terminology (continued)

Reporting Category	N	Mean % Correct
Usually read a newspaper every day	7,188	74
Read a newspaper 3 - 4 times/week	6,404	74
Read a newspaper once/week	6,470	72
Read a newspaper once/month	1,312	72
Hardly ever read a newspaper	6,250	67
Hardly ever read magazine articles	7,592	69
Read magazine articles once/month	4,895	74
Read magazine articles once or twice/week	10,207	74
Read magazine articles 3 - 4 times/week	4,885	71
Read 0 - 2 books/year	3,096	64
Read 3 - 5 books/year	4,391	70
Read 6 - 8 books/year	4,057	72
Read 1 book/month	4,682	73
Read 2 books/month	5,277	74
Read 1 book/week	3,230	74
Read more than 1 book/week	2,860	75

Grade/Year 8 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Notation and Terminology

Item 1.4.1: (3)

Simplify: $\sqrt{16}$

	Grade 8	Grade 12
A) 1	4	1
B) 8	17	4
C) 2	13	5
D) 4	51	87
E) I don't know	13	3
Missing	1	*
Multiple	1	*

Item 1.4.2: (7)

Which number is NOT a factor of 22?

	Grade 8	Grade 12
A) 0	78	86
B) 1	11	6
C) 2	3	2
D) 22	3	3
E) I don't know	4	3
Missing	*	*
Multiple	1	*

Item 1.4.3: (9)

Simplify: $10^4 =$

	Grade 8	Grade 12
A) 40	9	4
B) 1 000	3	2
C) 10 000	73	75
D) 100 000	12	18
E) I don't know	2	1
Missing	1	*
Multiple	1	1

Item 1.4.4: (20)

5 metres is the same length as:

	Grade 8	Grade 4	Grade 12
A) 50 centimetres	13	27	15
B) 500 centimetres	69	49	63
C) 50 millimetres	5	10	4
D) 500 millimetres	5	4	4
E) I don't know	7	7	13
Missing	1	3	1
Multiple	*	*	*

Item 1.4.5: (30)

Simplify: $4^3 =$

	Grade 8	Grade 12
A) 36	3	1
B) 64	72	87
C) 12	15	5
D) 32	6	2
E) I don't know	4	1
Missing	1	3
Multiple	*	*

Item 1.4.6: (33)

Which one of these is a whole number?

	Grade 8
A) 3.5	2
B) 3	88
C) $\sqrt{3}$	4
D) $3\frac{5}{8}$	3
E) I don't know	3
Missing	1
Multiple	*

* indicates <0.5%

Grade/Year 8 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Notation and Terminology (continued)

Item 1.4.7: (34)

The greatest common factor of 24 and 30 is:

	Grade 8	Grade 12
A) 2	9	8
B) 6	73	78
C) 120	11	10
D) 60	3	1
E) I don't know	3	1
Missing	1	1
Multiple	*	*

Item 1.4.8: (44)

The reciprocal of $\frac{3}{4}$ is:

	Grade 8	Grade 12
A) $\frac{4}{3}$	80	90
B) $1 - \frac{4}{3}$	5	2
C) $\frac{1}{4}$	4	2
D) 1	2	1
E) I don't know	8	4
Missing	1	*
Multiple	1	*

Item 1.4.9: (45)

Which one of the following is a prime number?

	Grade 8	Grade 12
A) 36	21	22
B) 35	7	3
C) 39	11	5
D) 37	53	65
E) I don't know	7	5
Missing	1	*
Multiple	1	*

* indicates < 0.5%

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.5: Knowledge of Geometric Facts

Reporting Category	N	Mean % Correct
Total	42,250	63
16 years or older	440	41
15 years	2,344	46
14 years	14,237	60
13 years	24,075	67
12 years or younger	757	65
Males	21,470	64
Females	20,162	62
One school attended	1,367	58
Two schools attended	12,479	66
Three schools attended	11,124	64
Four schools attended	6,970	63
Five schools attended	4,055	62
Six schools attended	2,236	61
Seven schools attended	1,291	59
Eight or more schools attended	1,920	54
Use a hand-held calculator at home	14,840	66
Do not use a hand-held calculator at home	26,524	62
Use a hand-held calculator for homework	12,214	64
Do not use a hand-held calculator for homework	29,069	63
Use a hand-held calculator in school	4,295	61
Do not use a hand-held calculator in school	37,581	63
Mathematics course semestered	12,865	62
Mathematics course not semestered	28,799	64

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.5: Knowledge of Geometric Facts (continued)

Reporting Category	N	Mean % Correct
No time spent on mathematics assignments	5,539	59
Less than 30 minutes/day spent on mathematics assignments	23,346	65
30 - 60 minutes/day spent on mathematics assignments	10,802	62
More than an hour/day spent on mathematics assignments	1,237	52
Born in Canada	22,792	65
Not born in Canada	3,394	65
2 years or less in Canada	511	62
3 - 4 years in Canada	508	64
5 years or more in Canada	2,226	66
English spoken before Grade 1	22,619	65
Other language spoken before Grade 1	4,253	63
English usually spoken in the home	25,055	65
Other language usually spoken in the home	2,558	62
Non-Canadian, Non-English	836	63
Canadian, Non-English	764	66
1st generation Canadian	598	62
Non-Canadian, English	1,745	67
Canadian, English	18,813	66
Do not usually watch T.V.	899	68
Watch T.V. less than 1 hour/day	863	71
Watch T.V. about 1 hour/day	2,144	69
Watch T.V. about 2 hours/day	5,247	67
Watch T.V. about 3 hours/day	6,401	66
Watch T.V. about 4 hours/day	5,382	64
Watch T.V. about 5 hours or more/day	6,703	59

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.5: Knowledge of Geometric Facts (continued)

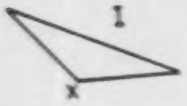
Reporting Category	N	Mean % Correct
Usually read a newspaper every day	7,188	67
Read a newspaper 3 - 4 times/week	6,404	67
Read a newspaper once/week	6,470	65
Read a newspaper once/month	1,312	63
Hardly ever read a newspaper	6,250	59
Hardly ever read magazine articles	7,592	61
Read magazine articles once/month	4,895	67
Read magazine articles once or twice/week	10,207	66
Read magazine articles 3 - 4 times/week	4,885	64
Read 0 - 2 books/year	3,096	57
Read 3 - 5 books/year	4,391	62
Read 6 - 8 books/year	4,057	64
Read 1 book/month	4,682	66
Read 2 books/month	5,277	66
Read 1 book/week	3,230	66
Read more than 1 book/week	2,860	69

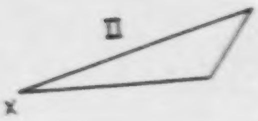
Grade/Year 8 - Test Results by Item

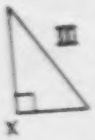
DOMAIN I: COMPUTATION AND KNOWLEDGE

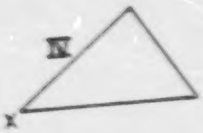
Objective 1.5: Knowledge of Geometric Facts

Item 1.5.1: (39)







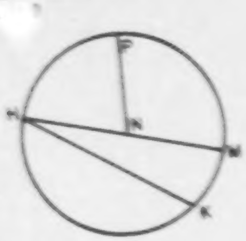


In which triangle is angle X an obtuse angle?

	Grade 8	Grade 12
A) I	40	62
B) II	12	8
C) III	25	10
D) IV	8	5
E) I don't know	12	14
Missing	1	*
Multiple	1	*

Item 1.5.2: (40)

If N is the centre, which segment is a diameter?



	Grade 8	Grade 12
A) $\overline{HK}$	5	1
B) $\overline{NP}$	18	14
C) $\overline{HP}$	5	2
D) $\overline{HM}$	63	78
E) I don't know	8	4
Missing	1	*
Multiple	1	*

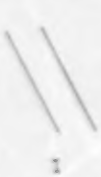
Item 1.5.3: (42)

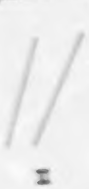
Which one of these has a shape most like a basketball?

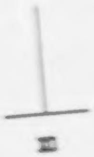
	Grade 8	Grade 12
A) Cone	6	2
B) Cylinder	14	5
C) Cube	3	2
D) Sphere	72	89
E) I don't know	3	1
Missing	1	*
Multiple	1	1

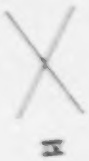
Item 1.5.4: (55)

Which diagram shows parallel lines?









	Grade 8
A) I	78
B) II	3
C) III	9
D) IV	7
E) I don't know	2
Missing	1
Multiple	*

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.6: Equivalent Forms of Rational Numbers

Reporting Category	N	Mean % Correct
Total	42,250	59
16 years or older	440	35
15 years	2,344	41
14 years	14,237	56
13 years	24,075	63
12 years or younger	757	60
Males	21,470	58
Females	20,162	60
One school attended	1,367	52
Two schools attended	12,479	62
Three schools attended	11,124	60
Four schools attended	6,970	59
Five schools attended	4,055	57
Six schools attended	2,236	56
Seven schools attended	1,291	52
Eight or more schools attended	1,920	49
Use a hand-held calculator at home	14,840	62
Do not use a hand-held calculator at home	26,524	58
Use a hand-held calculator for homework	12,214	60
Do not use a hand-held calculator for homework	29,069	59
Use a hand-held calculator in school	4,295	56
Do not use a hand-held calculator in school	37,581	60
Mathematics course semestered	12,865	58
Mathematics course not semestered	28,799	60

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.6: Equivalent Forms of Rational Numbers (continued)

Reporting Category	N	Mean % Correct
No time spent on mathematics assignments	5,539	54
Less than 30 minutes/day spent on mathematics assignments	23,346	62
30 - 60 minutes/day spent on mathematics assignments	10,802	58
More than an hour/day spent on mathematics assignments	1,237	48
Born in Canada	22,792	61
Not born in Canada	3,394	62
2 years or less in Canada	511	61
3 - 4 years in Canada	508	64
5 years or more in Canada	2,226	63
English spoken before Grade 1	22,619	60
Other language spoken before Grade 1	4,253	62
English usually spoken in the home	25,055	60
Other language usually spoken in the home	2,558	60
Non-Canadian, Non-English	836	66
Canadian, Non-English	764	64
1st generation Canadian	598	53
Non-Canadian, English	1,745	61
Canadian, English	18,813	61
Do not usually watch T.V.	899	60
Watch T.V. less than 1 hour/day	863	67
Watch T.V. about 1 hour/day	2,144	66
Watch T.V. about 2 hours/day	5,247	64
Watch T.V. about 3 hours/day	6,401	62
Watch T.V. about 4 hours/day	5,382	60
Watch T.V. about 5 hours or more/day	6,703	54

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.6: Equivalent Forms of Rational Numbers (continued)

Reporting Category	N	Mean % Correct
Usually read a newspaper every day	7,188	64
Read a newspaper 3 - 4 times/week	6,404	63
Read a newspaper once/week	6,470	60
Read a newspaper once/month	1,312	60
Hardly ever read a newspaper	6,250	53
Hardly ever read magazine articles	7,592	56
Read magazine articles once/month	4,895	63
Read magazine articles once or twice/week	10,207	62
Read magazine articles 3 - 4 times/week	4,885	59
Read 0 - 2 books/year	3,096	51
Read 3 - 5 books/year	4,391	57
Read 6 - 8 books/year	4,057	60
Read 1 book/month	4,682	61
Read 2 books/month	5,277	63
Read 1 book/week	3,230	64
Read more than 1 book/week	2,860	65

Grade/Year 8 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.6: Equivalent Forms of Rational Numbers

Item 1.6.1 (13)

Written as a percent, $\frac{1}{5} =$

	Grade 8	Grade 12
A) 5%	19	7
B) 0.5%	19	12
C) 20%	55	79
D) 50%	2	1
E) I don't know	2	1
Missing	1	1
Multiple	1	*

Item 1.6.2: (31)

Written as a decimal, $\frac{1}{8} =$

	Grade 8	Grade 12
A) 0.12	6	7
B) 0.8	41	18
C) 0.125	38	67
D) 0.18	8	3
E) I don't know	5	3
Missing	1	1
Multiple	*	*

Item 1.6.3: (35)

Written as a decimal, 20% =

	Grade 8	Grade 12
A) 0.2	47	65
B) 0.02	17	10
C) 2.0	12	4
D) 20.00	17	18
E) I don't know	5	2
Missing	2	*
Multiple	*	*

Item 1.6.4: (46)

In lowest terms, $\frac{24}{30} =$

	Grade 8	Grade 12
A) $\frac{8}{10}$	4	2
B) $\frac{12}{15}$	11	4
C) $\frac{4}{5}$	80	92
D) $\frac{5}{4}$	2	1
E) I don't know	2	*
Missing	1	1
Multiple	1	*

Item 1.6.5: (51)

$\frac{47}{5} =$

	Grade 8
A) $47\frac{1}{5}$	6
B) $47 \div \frac{1}{5}$	6
C) $4\frac{7}{5}$	5
D) $9\frac{2}{5}$	75
E) I don't know	6
Missing	1
Multiple	*

* indicates $<0.5\%$

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.1: Number Concepts

Reporting Category	N	Mean % Correct
Total	42,250	54
16 years or older	440	37
15 years	2,344	41
14 years	14,237	52
13 years	24,075	56
12 years or younger	757	55
Males	21,470	55
Females	20,162	52
One school attended	1,367	48
Two schools attended	12,479	56
Three schools attended	11,124	54
Four schools attended	6,970	54
Five schools attended	4,055	52
Six schools attended	2,236	52
Seven schools attended	1,291	50
Eight or more schools attended	1,920	48
Use a hand-held calculator at home	14,840	56
Do not use a hand-held calculator at home	26,524	53
Use a hand-held calculator for homework	12,214	54
Do not use a hand-held calculator for homework	29,069	54
Use a hand-held calculator in school	4,295	52
Do not use a hand-held calculator in school	37,581	54
Mathematics course semestered	12,865	54
Mathematics course not semestered	28,799	54

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.1: Number Concepts (continued)

Reporting Category	N	Mean % Correct
No time spent on mathematics assignments	5,539	51
Less than 30 minutes/day spent on mathematics assignments	23,346	56
30 - 60 minutes/day spent on mathematics assignments	10,802	52
More than an hour/day spent on mathematics assignments	1,237	45
Born in Canada	22,792	55
Not born in Canada	3,394	56
2 years or less in Canada	511	57
3 - 4 years in Canada	508	57
5 years or more in Canada	2,226	56
English spoken before Grade 1	22,619	55
Other language spoken before Grade 1	4,253	54
English usually spoken in the home	25,055	55
Other language usually spoken in the home	2,558	54
Non-Canadian, Non-English	836	57
Canadian, Non-English	764	55
1st generation Canadian	598	50
Non-Canadian, English	1,745	56
Canadian, English	18,813	55
Do not usually watch T.V.	899	55
Watch T.V. less than 1 hour/day	863	60
Watch T.V. about 1 hour/day	2,144	58
Watch T.V. about 2 hours/day	5,247	57
Watch T.V. about 3 hours/day	6,401	56
Watch T.V. about 4 hours/day	5,382	54
Watch T.V. about 5 hours or more/day	6,703	50

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.1: Number Concepts (continued)

Reporting Category	N	Mean % Correct
Usually read a newspaper every day	7,188	57
Read a newspaper 3 - 4 times/week	6,404	57
Read a newspaper once/week	6,470	54
Read a newspaper once/month	1,312	54
Hardly ever read a newspaper	6,250	50
Hardly ever read magazine articles	7,592	52
Read magazine articles once/month	4,895	56
Read magazine articles once or twice/week	10,207	56
Read magazine articles 3 - 4 times/week	4,885	54
Read 0 - 2 books/year	3,096	49
Read 3 - 5 books/year	4,391	52
Read 6 - 8 books/year	4,057	54
Read 1 book/month	4,682	56
Read 2 books/month	5,277	56
Read 1 book/week	3,230	56
Read more than 1 book/week	2,860	58

Grade/Year 8 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.1: Number Concepts

Item 2.1.1: (10)

The 2 in 2645 means:	Grade 8	Grade 4
A) 2 millions	4	5
B) 2 hundreds	1	3
C) 2 ones	2	1
D) 2 thousands	90	88
E) I don't know	1	2
Missing	*	1
Multiple	*	*

Item 2.1.2: (12)

Simplify: $\frac{0}{6} =$	Grade 8	Grade 12
A) 0	42	62
B) Infinity	3	3
C) 6	14	5
D) Cannot be done	36	27
E) I don't know	5	2
Missing	*	*
Multiple	1	1

Item 2.1.3: (14)

Which number is the SMALLEST?	Grade 8	Grade 12
A) 0.022	69	86
B) 2.002	12	6
C) 0.202	4	1
D) 0.220	12	6
E) I don't know	1	1
Missing	*	1
Multiple	1	*

Item 2.1.4: (18)

There are 13 boys and 15 girls in a group. What fraction of the group is boys?	Grade 8	Grade 12
A) $\frac{15}{28}$	5	5
B) $\frac{13}{15}$	53	38
C) $\frac{15}{13}$	6	4
D) $\frac{13}{28}$	32	51
E) I don't know	2	1
Missing	1	1
Multiple	*	*

Item 2.1.5: (47)

Which number is largest?	Grade 8	Grade 12
A) $\frac{2}{3}$	38	21
B) $\frac{4}{5}$	29	59
C) $\frac{3}{4}$	16	13
D) $\frac{5}{8}$	12	[illegible]
E) I don't know	2	1
Missing	1	1
Multiple	1	1

Item 2.1.6: (50)

As of June 1, 1976, the population of Canada was 22 589 416. Round off 22 589 416 to the nearest ten thousand.	Grade 8	Grade 12
A) 22 580 000	10	5
B) 23 000 000	10	7
C) 22 600 000	15	12
D) 22 590 000	59	75
E) I don't know	5	1
Missing	1	1
Multiple	*	*

* indicates <0.5%

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.2: Measurement Concepts

Reporting Category	N	Mean % Correct
Total	42,250	69
16 years or older	440	47
15 years	2,344	55
14 years	14,237	68
13 years	24,075	72
12 years or younger	757	70
Males	21,470	72
Females	20,162	67
One school attended	1,367	66
Two schools attended	12,479	72
Three schools attended	11,124	70
Four schools attended	6,970	69
Five schools attended	4,055	68
Six schools attended	2,236	68
Seven schools attended	1,291	66
Eight or more schools attended	1,920	61
Use a hand-held calculator at home	14,840	72
Do not use a hand-held calculator at home	26,524	68
Use a hand-held calculator for homework	12,214	70
Do not use a hand-held calculator for homework	29,069	69
Use a hand-held calculator in school	4,295	68
Do not use a hand-held calculator in school	37,581	70
Mathematics course semestered	12,865	69
Mathematics course not semestered	28,799	70

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.2: Measurement Concepts (continued)

Reporting Category	N	Mean % Correct
No time spent on mathematics assignments	5,539	66
Less than 30 minutes/day spent on mathematics assignments	23,346	72
30 - 60 minutes/day spent on mathematics assignments	10,802	68
More than an hour/day spent on mathematics assignments	1,237	59
Born in Canada	22,792	71
Not born in Canada	3,394	70
2 years or less in Canada	511	68
3 - 4 years in Canada	508	69
5 years or more in Canada	2,226	71
English spoken before Grade 1	22,619	71
Other language spoken before Grade 1	4,253	70
English usually spoken in the home	25,055	71
Other language usually spoken in the home	2,558	68
Non-Canadian, Non-English	836	70
Canadian, Non-English	764	72
1st generation Canadian	598	67
Non-Canadian, English	1,745	71
Canadian, English	18,813	71
Do not usually watch T.V.	899	70
Watch T.V. less than 1 hour/day	863	75
Watch T.V. about 1 hour/day	2,144	75
Watch T.V. about 2 hours/day	5,247	73
Watch T.V. about 3 hours/day	6,401	72
Watch T.V. about 4 hours/day	5,382	70
Watch T.V. about 5 hours or more/day	6,703	66

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.2: Measurement Concepts (continued)

Reporting Category	N	Mean % Correct
Usually read a newspaper every day	7,188	74
Read a newspaper 3 - 4 times/week	6,404	73
Read a newspaper once/week	6,470	71
Read a newspaper once/month	1,312	70
Hardly ever read a newspaper	6,250	63
Hardly ever read magazine articles	7,592	66
Read magazine articles once/month	4,895	72
Read magazine articles once or twice/week	10,207	72
Read magazine articles 3 - 4 times/week	4,885	71
Read 0 - 2 books/year	3,096	65
Read 3 - 5 books/year	4,391	69
Read 6 - 8 books/year	4,057	71
Read 1 book/month	4,682	71
Read 2 books/month	5,277	72
Read 1 book/week	3,230	72
Read more than 1 book/week	2,860	72

Grade/Year 8 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.2: Measurement Concepts

Item 2.2.1: (19)

The temperature on a sunny summer day would most likely be:

	Grade 8	Grade 4	Grade 12
A) 5° Celsius	5	5	3
B) 25° Celsius	69	32	87
C) 55° Celsius	12	27	5
D) 85° Celsius	9	29	3
E) I don't know	4	6	2
Missing	1	1	1
Multiple	*	*	*

Item 2.2.2: (21)

A milk jug is likely to hold:

	Grade 8	Grade 4	Grade 12
A) 1 millilitre	2	6	1
B) 10 millilitres	5	10	2
C) 1 litre	84	67	90
D) 100 litres	4	7	2
E) I don't know	4	8	4
Missing	1	2	1
Multiple	1	*	*

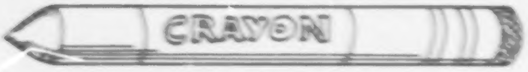
Item 2.2.3: (22)

A ten-year-old boy is likely to weigh:

	Grade 8	Grade 4	Grade 12
A) 35 grams	10	8	3
B) 75 grams	13	22	6
C) 35 kilograms	45	26	54
D) 75 kilograms	19	33	19
E) I don't know	12	8	17
Missing	1	2	1
Multiple	1	*	*

Item 2.2.4: (23)

About how long is this crayon?



	Grade 8	Grade 4	Grade 12
A) 1 centimetre	2	4	3
B) 10 centimetres	84	81	82
C) 1 metre	6	5	4
D) 10 metres	4	5	4
E) I don't know	3	4	7
Missing	1	1	1
Multiple	*	*	*

* Indicates <0.5%

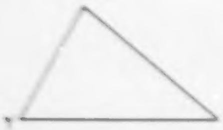
Grade/Year 8 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.2: Measurement Concepts (continued)

Item 2.2.5: (43)

Estimate the number of degrees in angle Y of this triangle.



		Grade 8	Grade 12
A)	60°	65	81
B)	90°	9	4
C)	30°	13	7
D)	120°	8	4
E)	I don't know	4	3
	Missing	1	*
	Multiple	1	*

* indicates <0.5%

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.3: Geometric Concepts

Reporting Category	N	Mean % Correct
Total	42,250	54
16 years or older	440	38
15 years	2,344	43
14 years	14,237	52
13 years	24,075	56
12 years or younger	757	56
Males	21,470	55
Females	20,162	53
One school attended	1,367	51
Two schools attended	12,479	56
Three schools attended	11,124	55
Four schools attended	6,970	54
Five schools attended	4,055	52
Six schools attended	2,236	51
Seven schools attended	1,291	50
Eight or more schools attended	1,920	47
Use a hand-held calculator at home	14,34[illegible]	56
Do not use a hand-held calculator at home	26,524	53
Use a hand-held calculator for homework	12,214	54
Do not use a hand-held calculator for homework	29,069	54
Use a hand-held calculator in school	4,295	53
Do not use a hand-held calculator in school	37,581	54
Mathematics course semestered	12,865	53
Mathematics course not semestered	28,799	54

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.3: Geometric Concepts (continued)

Reporting Category	N	Mean % Correct
No time spent on mathematics assignments	5,539	50
Less than 30 minutes/day spent on mathematics assignments	23,346	56
30 - 60 minutes/day spent on mathematics assignments	10,802	53
More than an hour/day spent on mathematics assignments	1,237	47
Born in Canada	22,792	55
Not born in Canada	3,394	58
2 years or less in Canada	511	60
3 - 4 years in Canada	508	58
5 years or more in Canada	2,226	57
English spoken before Grade 1	22,619	55
Other language spoken before Grade 1	4,253	56
English usually spoken in the home	25,055	55
Other language usually spoken in the home	2,558	55
Non-Canadian, Non-English	836	60
Canadian, Non-English	764	57
1st generation Canadian	598	60
Non-Canadian, English	1,745	57
Canadian, English	18,813	56
Do not usually watch T.V.	899	59
Watch T.V. less than 1 hour/day	863	62
Watch T.V. about 1 hour/day	2,144	60
Watch T.V. about 2 hours/day	5,247	58
Watch T.V. about 3 hours/day	6,401	56
Watch T.V. about 4 hours/day	5,382	54
Watch T.V. about 5 hours or more/day	6,703	50

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.3: Geometric Concepts (continued)

Reporting Category	N	Mean % Correct
Usually read a newspaper every day	7,188	57
Read a newspaper 3 - 4 times/week	6,404	57
Read a newspaper once/week	6,470	56
Read a newspaper once/month	1,312	54
Hardly ever read a newspaper	6,250	50
Hardly ever read magazine articles	7,592	51
Read magazine articles once/month	4,895	57
Read magazine articles once or twice/week	10,207	57
Read magazine articles 3 - 4 times/week	4,885	55
Read 0 - 2 books/year	3,096	49
Read 3 - 5 books/year	4,391	53
Read 6 - 8 books/year	4,057	55
Read 1 book/month	4,682	56
Read 2 books/month	5,277	57
Read 1 book/week	3,230	58
Read more than 1 book/week	2,860	58

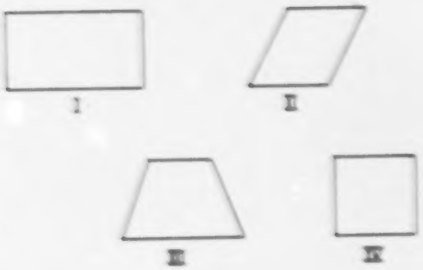
Grade/Year 8 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.3: Geometric Concepts

Item 2.3.1: (38)

Which one of these is NOT a parallelogram?



	Grade 8
A) I	6
B) II	5
C) III	69
D) IV	14
E) I don't know	4
Missing	1
Multiple	1

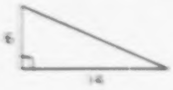
Item 2.3.2: (41)

What is the diameter of a circle with a radius of 4?

	Grade 8
A) 8	58
B) 6	4
C) 4	8
D) 2	14
E) I don't know	13
Missing	1
Multiple	1

Item 2.3.3: (52)

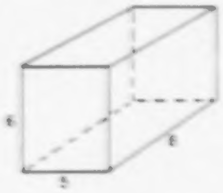
Find the area of this right triangle.



	Grade 8	Grade 12
A) 42	24	55
B) 20	18	5
C) 84	42	26
D) 21	4	3
E) I don't know	11	10
Missing	1	1
Multiple	1	*

Item 2.3.4: (54)

Find the volume of this box:



	Grade 8	Grade 12
A) 30	4	2
B) 40	8	3
C) 240	63	81
D) 19	13	3
E) I don't know	10	10
Missing	1	1
Multiple	1	*

* indicates < 0.5%

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts

Reporting Category	N	Mean % Correct
Total	42,250	53
16 years or older	440	32
15 years	2,344	38
14 years	14,237	50
13 years	24,075	56
12 years or younger	757	54
Males	21,470	52
Females	20,162	54
One school attended	1,367	49
Two schools attended	12,479	55
Three schools attended	11,124	54
Four schools attended	6,970	53
Five schools attended	4,055	51
Six schools attended	2,236	51
Seven schools attended	1,291	47
Eight or more schools attended	1,920	45
Use a hand-held calculator at home	14,840	54
Do not use a hand-held calculator at home	26,524	52
Use a hand-held calculator for homework	12,214	53
Do not use a hand-held calculator for homework	29,069	53
Use a hand-held calculator in school	4,295	50
Do not use a hand-held calculator in school	37,581	53
Mathematics course semestered	12,865	52
Mathematics course not semestered	28,799	53

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts (continued)

Reporting Category	N	Mean % Correct
No time spent on mathematics assignments	5,539	47
Less than 30 minutes/day spent on mathematics assignments	23,346	55
30 - 60 minutes/day spent on mathematics assignments	10,802	52
More than an hour/day spent on mathematics assignments	1,237	44
Born in Canada	22,792	54
Not born in Canada	3,394	54
2 years or less in Canada	511	56
3 - 4 years in Canada	508	54
5 years or more in Canada	2,226	54
English spoken before Grade 1	22,619	54
Other language spoken before Grade 1	4,253	54
English usually spoken in the home	25,0[illegible]5	54
Other language usually spoken in the home	2,558	53
Non-Canadian, Non-English	836	56
Canadian, Non-English	76	54
1st generation Canadian	598	51
Non-Canadian, English	1,745	54
Canadian, English	18,813	55
Do not usually watch T.V.	899	53
Watch T.V. less than 1 hour/day	863	57
Watch T.V. about 1 hour/day	2,144	57
Watch T.V. about 2 hours/day	5,247	56
Watch T.V. about 3 hours/day	6,401	55
Watch T.V. about 4 hours/day	5,382	54
Watch T.V. about 5 hours or more/day	6,703	49

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts

Reporting Category	N	Mean % Correct
Usually read a newspaper every day	7,188	56
Read a newspaper 3 - 4 times/week	6,404	56
Read a newspaper once/week	6,470	55
Read a newspaper once/month	1,312	53
Hardly ever read a newspaper	6,250	49
Hardly ever read magazine articles	7,592	51
Read magazine articles once/month	4,895	56
Read magazine articles once or twice/week	10,207	56
Read magazine articles 3 - 4 times/week	4,885	53
Read 0 - 2 books/year	3,096	47
Read 3 - 5 books/year	4,391	52
Read 6 - 8 books/year	4,057	54
Read 1 book/month	4,682	55
Read 2 books/month	5,277	56
Read 1 book/week	3,230	56
Read more than 1 book/week	2,860	57

Grade/Year 8 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts

Item 2.4.1: (48)

Simplify: $30 - 4 (8 - 2) =$

	Grade 8	Grade 12
A) 0	2	2
B) 20	25	7
C) 156	36	18
D) 6	18	67
E) I don't know	16	4
Missing	1	1
Multiple	1	*

Item 2.4.2: (56)

If $n = 5$, then $2n + 4 =$

	Grade 8
A) 14	72
B) [illegible]	5
C) 27	6
D) 11	8
E) I don't know	7
Missing	1
Multiple	*

Item 2.4.3: (57)

Solve: $3x - 3 = 12$

	Grade 8	Grade 12
A) $x = 7$	4	1
B) $x = 5$	68	82
C) $x = 3$	12	4
D) $x = 4$	7	9
E) I don't know	8	3
Missing	1	1
Multiple	1	*

* indicates <0.5%

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals and Percent

Reporting Category	N	Mean % Correct
Total	42,250	63
16 years or older	440	38
15 years	2,344	46
14 years	14,237	60
13 years	24,075	66
12 years or younger	757	64
Males	21,470	64
Females	20,162	61
One school attended	1,367	56
Two schools attended	12,479	66
Three schools attended	11,124	64
Four schools attended	6,970	62
Five schools attended	4,055	62
Six schools attended	2,236	61
Seven schools attended	1,291	58
Eight or more schools attended	1,920	54
Use a hand-held calculator at home	14,340	65
Do not use a hand-held calculator at home	26,524	62
Use a hand-held calculator for homework	12,214	63
Do not use a hand-held calculator for homework	29,069	63
Use a hand-held calculator in school	4,295	61
Do not use a hand-held calculator in school	37,581	63
Mathematics course semestered	12,865	62
Mathematics course not semestered	28,799	63

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals and Percent (continued)

Reporting Category	N	Mean % Correct
No time spent on mathematics assignments	5,539	59
Less than 30 minutes/day spent on mathematics assignments	23,346	65
30 - 60 minutes/day spent on mathematics assignments	10,802	60
More than an hour/day spent on mathematics assignments	1,237	50
Born in Canada	22,792	65
Not born in Canada	3,394	65
2 years or less in Canada	511	64
3 - 4 years in Canada	508	66
5 years or more in Canada	2,226	65
English spoken before Grade 1	22,619	64
Other language spoken before Grade 1	4,253	63
English usually spoken in the home	25,055	64
Other language usually spoken in the home	2,558	62
Non-Canadian, Non-English	836	66
Canadian, Non-English	764	64
1st generation Canadian	598	60
Non-Canadian, English	1,745	65
Canadian, English	18,813	65
Do not usually watch T.V.	899	64
Watch T.V. less than 1 hour/day	863	70
Watch T.V. about 1 hour/day	2,144	69
Watch T.V. about 2 hours/day	5,247	67
Watch T.V. about 3 hours/day	6,401	66
Watch T.V. about 4 hours/day	5,382	63
Watch T.V. about 5 hours or more/day	6,703	58

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals and Percent (continued)

Reporting Category	N	Mean % Correct
Usually read a newspaper every day	7,188	68
Read a newspaper 3 - 4 times/week	6,404	67
Read a newspaper once/week	6,470	64
Read a newspaper once/month	1,312	63
Hardly ever read a newspaper	6,250	56
Hardly ever read magazine articles	7,592	59
Read magazine articles once/month	4,895	66
Read magazine articles once or twice/week	10,207	66
Read magazine articles 3 - 4 times/week	4,885	64
Read 0 - 2 books/year	3,096	56
Read 3 - 5 books/year	4,391	61
Read 6 - 8 books/year	4,057	64
Read 1 book/month	4,682	65
Read 2 books/month	5,277	67
Read 1 book/week	3,230	66
Read more than 1 book/week	2,860	67

Grade/Year 8 - Test Results by Item

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals and Percent

Item 3.1.1: (24)

There are 25 members in the volleyball club. If the cost for each uniform is $24, how much would it cost to buy new uniforms for all the club members?

	Grade 8
A) $ 49	2
B) $6000	3
C) $ 600	91
D) $ 96	2
E) I don't know	2
Missing	1
Multiple	*

Item 3.1.2: (25)

The team scored 75 points in a tournament. Diane scored 20% of these points. How many points did Diane score?

	Grade 8
A) 1.5	4
B) 37.5	13
C) 20	11
D) 15	60
E) I don't know	10
Missing	1
Multiple	*

Item 3.1.3: (26)

In four months, the team spent the following amounts travelling to games:

1st month — $17.95
2nd month — $22.40
3rd month — $ 8.25
4th month — $15.80

What was the average amount spent on travelling each month?

	Grade 8
A) $10.10	6
B) $64.40	21
C) $32.20	5
D) $16.10	63
E) I don't know	5
Missing	1
Multiple	*

* indicates <0.5%

Grade/Year - Test Results by Item

DOMAIN 3: APPLICATIONS

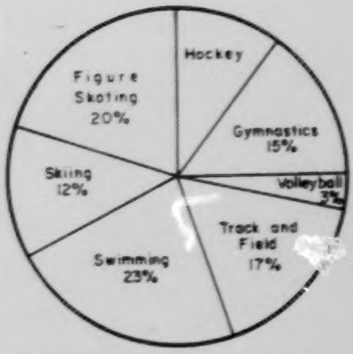
Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals and Percent (continued)

Item 3.1.4: (27)

If 4 volleyballs cost $96.00, how much will 10 volleyballs cost?

		Grade 8
A)	$960.00	25
B)	$240.00	63
C)	$ 24.00	2
D)	$384.00	5
E)	I don't know	3
	Missing	1
	Multiple	*

Item 3.1.5: (56)



The 1200 students in a secondary school were asked to name their favourite Olympic sport. The results are shown in the circle graph above.

What percent chose hockey?

		Grade 8	Grade 12
A)	100%	4	2
B)	8%	12	5
C)	10%	66	87
D)	12%	10	4
E)	I don't know	6	1
	Missing	1	1
	Multiple	1	*

* indicates <0.5%

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals and Percent (continued)

Item 3.1.6: (59)

How many students chose skiing?

	Grade 8	Grade 12
A) 144 students	57	79
B) 12 students	23	12
C) 1200 students	6	2
D) 1188 students	3	1
E) I don't know	9	4
Missing	1	1
Multiple	1	*

Item 3.1.7: (60)

How many more students chose figure skating than gymnastics?

	Grade 8	Grade 12
A) 420 students	7	4
B) 35 students	19	11
C) 60 students	38	65
D) 5 students	24	11
E) I don't know	10	7
Missing	1	1
Multiple	*	*

* indicates <0.5%

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.2: Solve Problems Involving Geometry and Measurement

Reporting Category	N	Mean % Correct
Total	42,250	51
16 years or older	440	28
15 years	2,344	34
14 years	14,237	48
13 years	24,075	55
12 years or younger	757	56
Males	21,470	54
Females	20,162	48
One school attended	1,367	45
Two schools attended	12,479	53
Three schools attended	11,124	52
Four schools attended	6,970	52
Five schools attended	4,055	50
Six schools attended	2,236	50
Seven schools attended	1,291	48
Eight or more schools attended	1,920	43
Use a hand-held calculator at home	14,840	54
Do not use a hand-held calculator at home	26,524	50
Use a hand-held calculator for homework	12,214	52
Do not use a hand-held calculator for homework	29,069	51
Use a hand-held calculator in school	4,295	49
Do not use a hand-held calculator in school	37,581	51
Mathematics course semestered	12,865	50
Mathematics course not semestered	28,799	52

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.2: Solve Problems Involving Geometry and Measurement (continued)

Reporting Category	N	Mean % Correct
No time spent on mathematics assignments	5,539	47
Less than 30 minutes/day spent on mathematics assignments	23,346	54
30 - 60 minutes/day spent on mathematics assignments	10,802	48
More than an hour/day spent on mathematics assignments	1,237	40
Born in Canada	22,792	53
Not born in Canada	3,394	55
2 years or less in Canada	511	56
3 - 4 years in Canada	508	56
5 years or more in Canada	2,226	55
English spoken before Grade 1	22,619	53
Other language spoken before Grade 1	4,253	52
English usually spoken in the home	25,055	53
Other language usually spoken in the home	2,558	51
Non-Canadian, Non-English	836	56
Canadian, Non-English	764	54
1st generation Canadian	598	47
Non-Canadian, English	1,745	56
Canadian, English	18,813	53
Do not usually watch T.V.	899	55
Watch T.V. less than 1 hour/day	863	59
Watch T.V. about 1 hour/day	2,144	58
Watch T.V. about 2 hours/day	5,247	56
Watch T.V. about 3 hours/day	6,401	54
Watch T.V. about 4 hours/day	5,382	52
Watch T.V. about 5 hours or more/day	6,703	46

Grade/Year 8 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.2: Solve Problems Involving Geometry and Measurement

Reporting Category	N	Mean % Correct
Usually read a newspaper every day	7,188	55
Read a newspaper 3 - 4 times/week	6,404	56
Read a newspaper once/week	6,470	53
Read a newspaper once/month	1,312	52
Hardly ever read a newspaper	6,250	46
Hardly ever read magazine articles	7,592	48
Read magazine articles once/month	4,895	55
Read magazine articles once or twice/week	10,207	55
Read magazine articles 3 - 4 times/week	4,885	52
Read 0 - 2 books/year	3,096	44
Read 3 - 5 books/year	4,391	50
Read 6 - 8 books/year	4,057	53
Read 1 book/month	4,682	53
Read 2 books/month	5,277	54
Read 1 book/week	3,230	55
Read more than 1 book/week	2,860	57

Grade/Year 8 - Test Results by Item

DOMAIN 3: APPLICATIONS

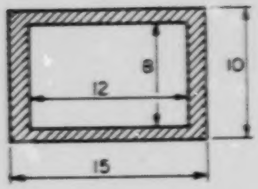
Objective 3.2: Solve Problems Involving Geometry and Measurement

Item 3.2.1: (36)

A map of B.C. is to be drawn so that 1 millimetre represents 5 kilometres. If the actual distance between Vernon and Penticton is 125 kilometres, how many millimetres apart should these two points be on the map?

	Grade 8	Grade 12
A) 125	5	2
B) 625	12	7
C) 120	5	2
D) 25	66	81
E) I don't know	11	7
Missing	*	*
Multiple	1	*

Item 3.2.2: (37)

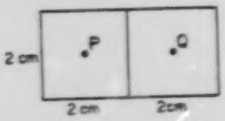


What is the area of the shaded portion of this figure?

	Grade 8	Grade 12
A) 54	27	54
B) 96	28	16
C) 120	11	6
D) 60	11	8
E) I don't know	21	15
Missing	1	1
Multiple	1	*

Item 3.2.3: (53)

P and Q are the centres of the 2 squares shown. What is the distance in centimetres from P to Q?



	Grade 8
A) 1	5
B) 2	60
C) 4	17
D) $\sqrt{2^2 + 2^2}$	10
E) I don't know	7
Missing	1
Multiple	*

* indicates <0.5%

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Computation with Rational Numbers in Fraction Form

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Total	23,136	83	3,506	64	10,607	81	8,576	95
19 years or older	1,389	72	318	57	708	71	307	91
18 years	7,127	81	1,194	62	3,438	79	2,334	95
17 years	13,993	86	1,919	66	6,252	83	5,647	96
16 years or younger	477	87	46	61	157	84	256	95
Male	11,069	83	1,211	62	4,790	78	4,856	94
Female	11,831	84	2,251	65	5,727	83	3,648	97
One or two schools attended	2,937	83	426	63	1,317	79	1,155	95
Three schools attended	6,304	84	954	65	2,873	81	2,381	96
Four schools attended	5,231	84	797	63	2,431	81	1,921	96
Five schools attended	3,399	84	495	64	1,535	81	1,311	95
Six schools attended	2,020	84	302	65	923	81	748	95
Seven schools attended	1,218	83	188	63	593	82	417	95
Eight or more schools attended	1,856	80	319	60	868	80	600	94
Use a hand-held calculator at home	11,708	86	1,292	64	4,577	80	5,650	96
Do not use a hand-held calculator at home	11,122	81	2,170	64	5,887	81	2,851	95
Use a hand-held calculator for homework	12,889	87	1,200	66	4,791	81	6,698	96
Do not use a hand-held calculator for homework	9,901	79	2,220	63	5,665	81	1,819	94
Use a hand-held calculator in school	11,846	87	1,019	66	4,280	81	6,366	96
Do not use a hand-held calculator in school	10,982	79	2,430	63	6,177	81	2,157	95
Mathematics course semestered	13,688	84	1,687	65	6,463	81	5,293	95
Mathematics course not semestered	9,036	82	1,735	63	3,960	81	3,189	96

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Computation with Rational Numbers in Fraction Form (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
No time spent on mathematics assignments	1,672	77	380	59	760	76	472	93
Less than 30 minutes spent on mathematics assignments	4,252	91	179	68	1,151	82	2,865	96
30 minutes or more/day spent on mathematics assignments	4,338	92	113	71	886	82	3,289	95
Do not have a part-time job	10,451	84	1,658	64	4,682	81	3,931	96
Have a part-time job on weekends only	4,229	84	571	64	1,864	80	1,723	95
Have a part-time job on weekdays only	1,119	84	182	66	484	81	432	96
Have a part-time job on both weekends and weekdays	7,090	83	1,046	64	3,482	80	2,451	95
Spend less than 5 hours on part-time job	1,136	86	157	63	474	82	487	96
Spend 5 - 10 hours on part-time job	3,518	84	476	65	1,538	81	1,434	96
Spend 10 - 20 hours on part-time job	5,232	84	733	64	2,499	82	1,936	95
Spend more than 20 hours on part-time job	2,444	79	427	62	1,263	78	704	93
Father's Education:								
Elementary school	2,639	83	491	66	1,254	82	842	96
Junior secondary school	4,377	82	777	64	2,150	81	1,385	95
Senior secondary school	4,495	82	728	61	2,114	80	1,577	95
Trade or vocational training	2,258	86	264	67	1,013	82	945	96
Technical training or some university	2,215	86	235	65	927	81	1,030	95
Completed university	2,525	88	181	60	867	82	1,442	95
Mother's Education:								
Elementary school	1,887	83	335	63	845	81	661	96
Junior secondary school	4,558	83	868	64	2,212	82	1,406	95
Senior secondary school	7,342	83	1,127	63	3,485	81	2,626	96
Trade or vocational training	1,767	86	195	68	7[illegible]	82	757	95
Technical training or some university	2,256	87	214	66	902	82	1,111	96
Completed university	1,560	86	124	62	575	80	834	95

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Computation with Rational Numbers in Fraction Form (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Plans After Leaving Secondary School:								
Look for a job	4,447	76	1,201	63	2,526	79	621	93
Business, vocational, art or trade training	2,567	76	539	63	1,546	77	429	92
Technical institute	1,470	88	100	72	511	80	842	95
Community college: university transfer	2,350	89	135	66	960	84	1,247	96
Community college: career program	1,845	80	339	61	1,010	81	460	94
University	4,896	94	115	72	1,257	87	3,478	97
Other plans	2,111	78	482	63	1,111	80	446	93
Undecided	3,110	82	526	65	1,548	81	985	95
Born in Canada	12,198	84	1,793	65	5,637	81	4,597	96
Not born in Canada	1,779	86	187	64	680	80	879	96
Two years or less in Canada	331	89	20	70	96	81	204	96
3 - 4 years in Canada	221	84	22	59	73	75	122	95
5 years or more in Canada	1,195	86	141	65	489	81	549	96
English spoken before starting Grade 1	11,395	84	1,681	64	5,323	81	4,226	96
Other language spoken before starting Grade 1	2,384	86	364	67	1,122	81	1,302	96
English usually spoken in the home	12,909	84	1,898	64	5,990	81	4,829	96
Other language usually spoken in the home	1,569	87	196	68	577	82	768	96
Non-Canadian, non-English	658	89	59	68	197	81	390	97
Canadian, non-English	577	86	86	71	233	81	249	96
1st generation Canadian	193	84	31	62	89	83	69	96
Non-Canadian, English	719	83	88	62	336	80	286	95
Canadian, English	9,956	84	1,457	65	4,636	82	3,725	96

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Computation with Rational Numbers in Fraction Form (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Do not usually watch television	1,289	87	166	68	567	84	538	96
Watch T.V. less than 1 hour/day	1,615	88	163	65	609	84	818	96
Watch T.V. about 1 hour/day	2,572	87	310	70	1,105	83	1,123	96
Watch T.V. about 2 hours/day	3,637	85	499	64	1,624	82	1,461	96
Watch T.V. about 3 hours/day	2,774	82	453	64	1,363	79	925	95
Watch T.V. about 4 hours/day	1,685	80	302	62	868	79	478	95
Watch T.V. 5 hours or more/day	899	78	192	61	440	76	251	94
Usually read a newspaper every day	5,638	86	678	66	2,514	82	2,372	96
Read a newspaper 3 - 4 times/ week	3,514	84	494	65	1,543	81	1,424	96
Read a newspaper once/week	3,198	83	545	65	1,496	81	1,113	95
Read a newspaper once/month	502	83	78	61	235	81	180	96
Hardly ever read a newspaper	1,635	81	296	63	782	79	518	95
Hardly ever read a magazine	2,060	81	392	64	982	80	630	95
Read a magazine once/month	2,665	85	387	67	1,226	81	1,017	96
Read a magazine 1 - 2 times/ week	6,749	85	885	65	3,040	81	2,734	96
Read a magazine 3 - 4 times/ week	2,996	84	423	64	1,313	81	1,223	96
Read 0 - 2 books/year	2,518	79	486	62	1,235	77	746	95
Read 3 - 5 books/year	3,112	84	430	64	1,452	81	1,179	95
Read 6 - 8 books/year	2,251	86	286	67	974	82	958	96
Read 1 book/month	2,197	85	300	66	966	82	911	96
Read 2 books/month	2,323	87	272	67	1,037	83	981	97
Read 1 book/week	1,224	85	182	67	533	83	490	96
Read more than 1 book/week	900	85	138	62	398	84	351	95

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Computation with Rational Numbers in Fraction Form (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Father's Occupation:								
Clerical	240	84	27	54	104	81	104	96
Deceased	498	81	86	65	238	77	163	97
Farmer	435	85	68	68	199	82	159	97
Managerial	3,246	85	411	65	1,473	81	1,318	95
Mining, logging, fishing, farmwork	1,124	80	197	63	598	78	313	96
Professional	1,306	90	92	71	440	84	761	96
Retired	532	84	96	77	258	82	175	96
Sales	687	87	95	64	267	84	317	96
Semi-skilled	881	84	141	64	420	83	310	96
Service	543	85	76	59	228	82	236	96
Skilled	2,461	83	391	65	1,159	81	869	96
Technical	392	85	46	68	158	81	179	95
Transport, communications	412	84	61	68	205	80	141	96
Unskilled	436	86	64	73	193	80	173	96
Other	1,124	82	202	63	548	81	351	96

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Computation with Rational Numbers in Fraction Form (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Mother's Occupation:								
Clerical	1,994	85	263	66	949	83	749	96
Deceased	158	83	26	64	76	81	53	97
Farmer	116	82	17	62	55	76	41	97
Homemaker	6,529	84	962	64	2,867	81	2,616	96
Managerial	647	85	85	69	316	81	236	96
Professional	896	87	67	67	374	81	445	96
Retired	188	80	43	62	87	81	57	91
Sales	549	85	76	65	268	83	201	97
Semi-skilled	334	85	53	62	120	81	157	98
Service, recreation	489	82	96	65	228	81	156	96
Skilled	203	83	30	69	100	79	73	95
Technical	278	84	29	68	121	76	126	96
Transport, communications	97	86	9	72	47	84	39	96
Unskilled	422	85	55	64	201	84	158	96
Other	1,479	81	252	64	722	79	468	95

Grade/Year 12 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Computation with Rational Numbers in Fraction Form

Item 1.1.1 (2):

Add: $\frac{1}{2} + \frac{1}{3} =$

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) $\frac{2}{5}$	9				19
B) $\frac{1}{5}$	2				8
C) $\frac{1}{6}$	2				5
D) $\frac{5}{6}$	86	67	84	98	66
E) I don't know	*				1
Missing	*				*
Multiple	*				1

Item 1.1.2 (6):

Subtract: $\frac{2}{5} - \frac{1}{3} =$

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) $\frac{5}{6}$	1				1
B) $\frac{1}{15}$	86	67	84	96	63
C) $\frac{1}{2}$	7				22
D) $\frac{11}{15}$	5				9
E) I don't know	1				2
Missing	1				1
Multiple	*				*

* indicates <0.5%

Grade/Year 12 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.1: Computation with Rational Numbers in Fraction Form (continued)

Item 1.1.3 (11):

Divide: $\frac{2}{3} \div \frac{5}{7} =$

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) $\frac{10}{21}$	11				15
B) $\frac{14}{15}$	74	47	70	91	62
C) $\frac{9}{8}$	2				5
D) $\frac{15}{14}$	6				7
E) I don't know	5				10
Missing	1				1
Multiple	1				1

Item 1.1.4 (29):

Multiply: $\frac{3}{4} \times \frac{5}{7} =$

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) $\frac{15}{28}$	87	74	85	96	82
B) $\frac{21}{20}$	5				6
C) $\frac{20}{21}$	5				6
D) $\frac{8}{11}$	1				1
E) I don't know	2				3
Missing	*				2
Multiple	*				*

* indicates $<0.5\%$

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Computation with Rational Numbers in Decimal Form

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Total	23,136	80	3,506	65	10,607	77	8,576	90
19 years or older	1,389	70	318	58	708	70	307	86
18 years	7,127	78	1,194	64	3,438	76	2,334	90
17 years	13,993	82	1,919	67	6,252	79	5,647	91
16 years or younger	477	82	46	53	157	80	256	92
Male	11,069	79	1,211	62	4,790	74	4,866	89
Female	11,831	81	2,251	67	5,727	80	3,648	92
One or two schools attended	2,937	80	426	63	1,317	77	1,155	91
Three schools attended	6,304	80	954	66	2,873	77	2,381	91
Four schools attended	5,231	80	797	65	2,431	78	1,921	91
Five schools attended	3,399	81	495	65	1,535	78	1,311	91
Six schools attended	2,020	80	302	68	923	77	748	90
Seven schools attended	1,218	81	188	65	593	79	417	91
Eight or more schools attended	1,856	77	319	62	868	76	600	88
Use a hand-held calculator at home	11,708	82	1,292	65	4,577	78	5,650	91
Do not use a hand-held calculator at home	11,122	78	2,170	65	5,887	77	2,851	90
Use a hand-held calculator for homework	12,889	84	1,200	66	4,791	78	6,698	91
Do not use a hand-held calculator for homework	9,901	76	2,220	65	5,665	77	1,819	89
Use a hand-held calculator in school	11,846	84	1,019	67	4,280	78	6,366	91
Do not use a hand-held calculator in school	10,982	76	2,430	65	6,177	77	2,157	90
Mathematics course semestered	13,688	81	1,687	65	6,463	77	5,293	90
Mathematics course not semestered	9,036	80	1,735	66	3,960	78	3,189	91

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Computation with Rational Numbers in Decimal Form (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
No time spent on mathematics assignments	1,672	73	380	58	760	71	472	89
Less than 30 minutes spent on mathematics assignments	4,252	86	179	69	1,151	77	2,865	91
30 minutes or more/day spent on mathematics assignments	4,338	86	113	66	886	75	3,289	90
Do not have a part-time job	10,451	80	1,658	65	4,682	78	3,931	91
Have a part-time job on weekends only	4,229	81	571	67	1,864	77	1,723	90
Have a part-time job on weekdays only	1,119	80	182	63	484	76	432	91
Have a part-time job on both weekends and weekdays	7,090	80	1,046	66	3,482	77	2,451	90
Spend less than 5 hours on part-time job	1,136	81	157	61	474	77	487	92
Spend 5 - 10 hours on part-time job	3,518	81	476	66	1,538	77	1,434	90
Spend 10 - 20 hours on part-time job	5,232	81	733	66	2,499	79	1,936	91
Spend more than 20 hours on part-time job	2,444	77	427	66	1,263	74	704	88
Father's Education:								
Elementary school	2,639	80	491	68	1,254	79	842	91
Junior secondary school	4,377	80	777	64	2,150	78	1,386	91
Senior secondary school	4,495	79	728	64	2,114	76	1,577	90
Trade or vocational training	2,258	82	264	70	1,013	78	945	91
Technical training or some university	2,215	82	235	62	927	77	1,030	90
Completed university	2,525	84	181	64	867	78	1,442	90
Mother's Education:								
Elementary school	1,887	80	335	66	845	79	661	91
Junior secondary school	4,558	80	868	67	2,212	78	1,406	91
Senior secondary school	7,342	80	1,127	64	3,485	77	2,626	90
Trade or vocational training	1,767	83	195	71	786	78	757	91
Technical training or some university	2,256	83	214	64	902	78	1,111	92
Completed university	1,560	83	124	62	575	77	834	90

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Computaion with Rational Numbers in Decimal Form (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Plans After Leaving Secondary School:								
Look for a job	4,447	74	1,201	66	2,526	76	621	87
Business, vocational, art or trade training	2,567	74	539	63	1,546	75	429	87
Technical institute	1,470	84	100	68	511	78	842	89
Community college: university transfer	2,350	85	135	69	960	79	1,247	91
Community college: career program	1,845	78	339	65	1,010	78	460	90
University	4,896	89	115	67	1,257	81	3,478	92
Other plans	2,111	76	482	64	1,111	76	446	89
Undecided	3,110	80	526	66	1,548	78	985	89
Born in Canada	12,198	81	1,793	67	5,637	78	4,597	91
Not born in Canada	1,779	83	187	64	680	78	879	92
Two years or less in Canada	331	85	20	62	[illegible]	76	204	91
3 - 4 years in Canada	221	82	22	63	73	73	122	92
5 years or more in Canada	1,195	83	141	64	489	79	549	92
English spoken before starting Grade 1	11,395	81	1,681	66	5,323	78	4,226	91
Other language spoken before starting Grade 1	2,384	83	364	67	1,122	78	1,302	92
English usually spoken in the home	12,909	81	1,898	66	5,990	78	4,829	91
Other language usually spoken in the home	1,569	84	196	67	577	79	768	91
Non-Canadian, non-English	658	86	59	68	197	78	390	92
Canadian, non-English	577	83	86	70	233	80	249	91
1st generation Canadian	193	80	31	63	89	79	69	90
Non-Canadian, English	719	81	88	63	336	77	286	92
Canadian, English	9,956	81	1,457	67	4,636	78	3,725	91

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Computation with Rational Numbers in Decimal Form (continued)

Reporting Category	Total N	Total Mean % Correct	Math 10 N	Math 10 Mean % Correct	Math 11 N	Math 11 Mean % Correct	Math 12 N	Math 12 Mean % Correct
Do not usually watch television	1,289	83	166	69	567	79	538	92
Watch T.V. less than 1 hour/day	1,615	84	163	66	609	80	818	91
Watch T.V. about 1 hour/day	2,572	83	310	69	1,105	78	1,123	92
Watch T.V. about 2 hours/day	3,637	81	499	66	1,624	78	1,461	91
Watch T.V. about 3 hours/day	2,774	80	453	67	1,363	78	925	91
Watch T.V. about 4 hours/day	1,685	78	302	66	868	77	478	90
Watch T.V. 5 hours or more/day	899	78	192	62	440	78	251	90
Usually read a newspaper every day	5,638	82	678	66	2,514	78	2,372	91
Read a newspaper 3 - 4 times/week	3,514	82	494	67	1,543	78	1,424	92
Read a newspaper once/week	3,198	81	545	66	1,496	78	1,113	91
Read a newspaper once/month	502	81	78	68	235	79	180	90
Hardly ever read a newspaper	1,635	80	296	66	782	77	518	92
Hardly ever read a magazine	2,060	79	392	66	982	77	630	92
Read a magazine once/month	2,665	82	387	68	1,226	79	1,017	92
Read a magazine 1 - 2 times/week	6,749	82	885	66	3,040	78	2,734	91
Read a magazine 3 - 4 times/week	2,996	81	423	65	1,313	78	1,223	91
Read 0 - 2 books/year	2,518	77	486	63	1,235	76	746	90
Read 3 - 5 books/year	3,112	80	430	65	1,452	76	1,179	91
Read 6 - 8 books/year	2,251	82	286	68	974	78	958	91
Read 1 book/month	2,197	83	300	70	966	79	911	92
Read 2 books/month	2,323	83	272	67	1,037	79	981	92
Read 1 book/week	1,224	82	182	68	533	80	490	91
Read more than 1 book/week	900	83	138	66	398	82	351	91

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Computation with Rational Numbers in Decimal Form (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Father's Occupation:								
Clerical	240	84	27	67	104	80	104	92
Deceased	498	78	86	65	238	75	163	92
Farmer	435	81	68	66	199	78	159	93
Managerial	3,246	81	411	66	1,473	77	1,318	91
Mining, logging, fishing, farmwork	1,124	78	197	67	598	76	313	90
Professional	1,306	85	92	67	440	79	761	91
Retired	532	82	96	72	258	78	175	93
Sales	687	82	95	63	267	78	317	91
Semi-skilled	881	81	141	66	420	79	310	92
Service	543	83	76	62	228	80	236	92
Skilled	2,461	81	391	67	1,159	78	869	91
Technical	392	81	46	63	158	78	179	90
Transport, communications	412	80	61	68	205	76	141	92
Unskilled	436	83	64	72	193	78	173	92
Other	1,124	81	202	63	548	80	351	92

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Computation with Rational Numbers in Decimal Form (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Mother's Occupation:								
Clerical	1,994	82	263	65	949	80	749	90
Deceased	158	81	26	68	76	78	53	94
Farmer	116	78	17	59	55	69	41	97
Homemaker	6,529	82	962	67	2,867	78	2,616	91
Managerial	647	81	85	69	316	77	236	91
Professional	896	83	67	65	374	77	445	91
Retired	188	78	43	69	87	75	57	91
Sales	549	81	76	67	268	77	201	91
Semi-skilled	334	83	53	65	120	82	157	92
Service, recreation	489	80	96	67	228	78	156	93
Skilled	203	82	30	62	100	80	73	93
Technical	278	81	29	72	121	74	126	90
Transport, communications	97	81	9	62	47	78	39	92
Unskilled	422	83	55	70	201	81	158	90
Other	1,479	78	252	64	722	76	468	91

Grade/Year 12 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Computation with Rational Numbers in Decimal Form

Item 1.2.1 (1):

Subtract: 62.1 – 23.8 =

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 41.7	2				4
B) 38.3	87	78	86	93	79
C) 49.3	3				4
D) 3.83	7				11
E) I don't know	1				1
Missing	1				1
Multiple	*				1

Item 1.2.2 (5):

Multiply: .15 x .45 =

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 6.75	11				16
B) 0.0675	78	57	74	92	63
C) 0.675	8				13
D) 67.5	1				3
E) I don't know	1				3
Missing	1				1
Multiple	*				*

Item 1.2.3 (15):

Add: 5.72 + 18.005 + 7.3 =

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 31.025	84	75	83	90	72
B) 30.025	9				14
C) 31.755	3				6
D) 31.007	1				2
E) I don't know	1				5
Missing	1				*
Multiple	*				*

* indicates <0.5%

Grade/Year 12 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.2: Computation with Rational Numbers in Decimal Form (continued)

Item 1.2.4 (17):

Subtract: 51.2 - 4.35 =

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 46.95	9				15
B) 46.85	86	71	84	95	66
C) 17.7	1				4
D) 7.7	2				9
E) I don't know	1				4
Missing	1				1
Multiple	*				*

Item 1.2.5 (28):

Divide: .12 $\overline{)\,.036}$

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 3	5				12
B) 0.003	13				11
C) 0.3	66	44	60	82	58
D) 0.03	13				13
E) I don't know	2				4
Missing	1				1
Multiple	*				*

* indicates <0.5%

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Knowledge of Notation and Terminology

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Total	23,136	76	3,506	54	10,607	71	8,576	91
19 years or older	1,389	62	318	46	708	62	307	84
18 years	7,127	73	1,194	52	3,438	69	2,334	90
17 years	13,993	78	1,919	57	6,252	73	5,647	92
16 years or younger	477	81	46	50	157	78	256	92
Male	11,069	79	1,211	59	4,790	72	4,866	91
Female	11,831	73	2,251	52	5,727	70	3,648	90
One or two schools attended	2,937	76	426	54	1,317	72	1,155	91
Three schools attended	6,304	76	954	54	2,873	71	2,381	91
Four schools attended	5,231	76	797	55	2,431	72	1,921	91
Five schools attended	3,399	76	495	54	1,535	71	1,311	91
Six schools attended	2,020	76	302	55	923	72	748	91
Seven schools attended	1,218	75	188	53	593	72	417	91
Eight or more schools attended	1,856	73	319	50	868	71	600	89
Use a hand-held calculator at home	11,708	79	1,292	54	4,577	72	5,650	92
Do not use a hand-held calculator at home	11,122	72	2,170	54	5,887	71	2,851	90
Use a hand-held calculator for homework	12,889	81	1,200	55	4,791	72	6,698	92
Do not use a hand-held calculator for homework	9,901	79	2,220	54	5,665	70	1,819	89
Use a hand-held calculator in school	11,846	81	1,019	56	4,280	72	6,366	92
Do not use a hand-held calculator in school	10,982	70	2,430	53	6,177	70	2,157	89
Mathematics course semestered	13,688	77	1,687	55	6,463	71	5,293	91
Mathematics course not semestered	9,036	75	1,735	54	3,960	72	3,189	92

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Knowledge of Notation and Terminology (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
No time spent on mathematics assignments	1,672	68	380	48	760	66	472	89
Less than 30 minutes spent on mathematics assignments	4,252	86	179	58	1,151	74	2,865	92
30 minutes or more/day spent on mathematics assignments	4,338	86	113	58	886	73	3,289	90
Do not have a part-time job	10,451	76	1,658	54	4,682	71	3,931	91
Have a part-time job on weekends only	4,229	77	571	54	1,864	72	1,723	90
Have a part-time job on weekdays only	1,119	76	182	56	484	70	432	92
Have a part-time job on both weekends and weekdays	7,090	76	1,046	55	3,482	72	2,451	91
Spend less than 5 hours on part-time job	1,136	77	157	50	474	72	487	92
Spend 5 - 10 hours on part-time job	3,518	77	476	56	1,538	72	1,434	91
Spend 10 - 20 hours on part-time job	5,232	77	733	55	2,499	72	1,936	91
Spend more than 20 hours on part-time job	2,444	72	427	54	1,263	70	704	90
Father's Education:								
Elementary school	2,639	74	491	53	1,254	70	842	92
Junior secondary school	4,377	74	777	53	2,150	70	1,386	91
Senior secondary school	4,495	75	728	53	2,114	70	1,577	91
Trade or vocational training	2,258	80	264	61	1,013	74	945	92
Technical training or some university	2,215	80	235	56	927	75	1,030	91
Completed university	2,525	8[illegible]	181	58	867	75	1,442	92
Mother's Education:								
Elementary school	1,887	74	335	52	845	70	661	91
Junior secondary school	4,558	74	868	54	2,212	70	1,406	91
Senior secondary school	7,342	76	1,127	55	3,485	71	2,626	91
Trade or vocational training	1,767	80	195	60	786	74	757	91
Technical training or some university	2,256	81	214	55	902	75	1,111	92
Completed university	1,560	82	124	57	575	74	834	91

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Knowledge of Notation and Terminology

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Plans After Leaving Secondary School:								
Look for a job	4,447	66	1,201	53	2,526	68	621	88
Business, vocational, art or trade training	2,567	68	539	52	1,546	69	429	86
Technical institute	1,470	83	100	63	511	75	842	90
Community college: university transfer	2,350	83	135	59	960	75	1,247	91
Community college: career program	1,845	71	339	52	1,010	70	460	89
University	4,896	89	115	62	1,257	79	3,478	93
Other plans	2,111	70	482	54	1,111	70	446	90
Undecided	3,110	74	526	54	1,548	71	985	90
Born in Canada	12,198	77	1,793	56	5,637	72	4,597	92
Not born in Canada	1,779	79	187	54	680	72	879	91
Two years or less in Canada	331	82	20	53	96	74	204	90
3 - 4 years in Canada	221	78	22	53	73	68	122	90
5 years or more in Canada	1,195	79	141	55	489	72	549	92
English spoken before starting Grade 1	11,395	77	1,681	55	5,323	72	4,226	92
Other language spoken before starting Grade 1	2,384	79	364	56	1,122	72	1,302	91
English usually spoken in the home	12,909	77	1,898	55	5,990	72	4,829	92
Other language usually spoken in the home	1,569	78	196	54	577	71	768	91
Non-Canadian, non-English	658	81	59	54	197	70	390	91
Canadian, non-English	577	78	86	56	233	72	249	92
1st generation Canadian	193	73	31	50	89	70	69	88
Non-Canadian, English	719	78	88	56	336	74	286	92
Canadian, English	9,956	77	1,457	56	4,636	72	3,725	92

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Knowledge of Notation and Terminology (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Do not usually watch television	1,289	79	166	56	567	74	538	92
Watch T.V. less than 1 hour/day	1,615	82	163	60	609	74	818	92
Watch T.V. about 1 hour/day	2,572	80	310	58	1,105	75	1,123	92
Watch T.V. about 2 hours/day	3,637	77	499	54	1,624	72	1,461	92
Watch T.V. about 3 hours/day	2,774	75	453	55	1,363	70	925	91
Watch T.V. about 4 hours/day	1,685	72	302	53	868	69	478	91
Watch T.V. 5 hours or more/day	899	69	192	49	440	67	251	89
Usually read a newspaper every day	5,638	79	678	56	2,514	73	2,372	92
Read a newspaper 3 - 4 times/week	3,514	78	494	55	1,543	72	1,424	92
Read a newspaper once/week	3,198	75	545	54	1,496	71	1,113	91
Read a newspaper once/month	502	76	78	56	235	73	180	91
Hardly ever read a newspaper	1,635	72	296	53	782	68	518	90
Hardly ever read a magazine	2,060	72	392	52	982	69	630	90
Read a magazine once/month	2,665	77	387	55	1,226	72	1,017	92
Read a magazine 1 - 2 times/week	6,749	78	885	56	3,040	72	2,734	92
Read a magazine 3 - 4 times/week	2,996	78	423	56	1,313	74	1,223	92
Read 0 - 2 books/year	2,518	72	486	53	1,235	69	746	90
Read 3 - 5 books/year	3,112	76	430	54	1,452	71	1,179	91
Read 6 - 8 books/year	2,251	79	286	57	974	72	958	92
Read 1 book/month	2,197	78	300	57	966	72	911	92
Read 2 books/month	2,323	79	272	56	1,037	73	981	92
Read 1 book/week	1,224	78	182	56	533	74	490	92
Read more than 1 book/week	900	78	138	55	398	75	351	92

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Knowledge of Notation and Terminology (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Father's Occupation:								
Clerical	240	79	27	51	104	73	104	93
Deceased	498	74	86	53	238	69	163	92
Farmer	435	77	68	57	199	73	159	92
Managerial	3,246	78	411	55	1,473	72	1,318	91
Mining, logging, fishing, farmwork	1,124	71	197	53	598	68	313	91
Professional	1,306	85	92	62	440	76	761	92
Retired	532	76	96	56	258	72	175	92
Sales	687	80	95	57	267	74	317	92
Semi-skilled	881	75	141	51	420	71	310	91
Service	543	80	76	53	228	75	236	93
Skilled	2,461	76	391	55	1,159	72	869	92
Technical	392	79	46	58	158	73	179	90
Transport, communications	412	77	61	57	205	73	141	93
Unskilled	436	77	64	57	193	71	173	92
Other	1,124	74	202	54	548	71	351	90

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Knowledge of Notation and Terminology (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Mother's Occupation:								
Clerical	1,994	78	263	56	949	74	749	92
Deceased	158	76	26	53	76	73	53	94
Farmer	116	74	17	51	55	66	41	93
Homemaker	6,529	77	962	55	2,867	72	2,616	92
Managerial	647	76	85	54	316	72	236	91
Professional	896	82	67	57	374	76	445	92
Retired	188	70	43	48	87	70	57	88
Sales	549	78	76	55	268	73	201	94
Semi-skilled	334	78	53	54	120	72	157	92
Service, recreation	489	73	96	54	228	69	156	90
Skilled	203	77	30	56	100	72	73	91
Technical	278	80	29	62	121	72	126	92
Transport, communications	97	79	9	61	47	74	39	90
Unskilled	422	78	55	57	201	72	158	92
Other	1,479	72	252	54	722	68	468	90

Grade/Year 12 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Knowledge of Notation and Terminology

Item 1.3.1 (3):

Simplify: $\sqrt{16} =$

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 1	1				4
B) 8	4				17
C) 2	5				13
D) 4	87	62	87	99	51
E) I don't know	3				13
Missing	*				1
Multiple	*				1

Item 1.3.2 (7):

Which number is NOT a factor of 22?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 0	86	71	83	96	78
B) 1	6				11
C) 2	2				3
D) 22	3				3
E) I don't know	3				4
Missing	*				*
Multiple	*				1

Item 1.3.3 (9):

Simplify: $10^4 =$

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 40	4				9
B) 1 000	2				3
C) 10 000	75	56	71	87	73
D) 100 000	18				12
E) I don't know	1				2
Missing	*				1
Multiple	1				1

* indicates 0.5%

Grade/Year 12 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Knowledge of Notation and Terminology (continued)

Item 1.3.4 (10):

Expressed in scientific notation, the depth of a certain part of the ocean is 3.6×10^2 metres. What is the value of 3.6×10^2?

	Total Grade 12	Math 10	Math 11	Math 12
A) 36	2			
B) 3600	24			
C) 1296	1			
D) 360	67	38	61	88
E) I don't know	5			
Missing	*			
Multiple	*			

Item 1.3.5 (20):

5 metres is the same length as:

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8	Grade 4
A) 50 centimetres	15				13	27
B) 500 centimetres	63	38	55	85	69	49
C) 50 millimetres	4				5	10
D) 500 millimetres	4				5	4
E) I don't know	13				7	7
Missing	1				1	3
Multiple	*				*	*

Item 1.3.6 (30):

Simplify: $4^3 =$

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 36	1				3
B) 64	87	67	88	96	72
C) 12	5				15
D) 32	2				6
E) I don't know	1				4
Missing	3				1
Multiple	*				*

* indicates <0.5%

Grade/Year 12 - Test Results by Item

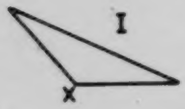
DOMAIN I: COMPUTATION AND KNOWLEDGE

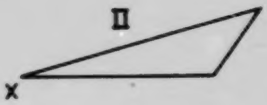
Objective 1.3: Knowledge of Notation and Terminology (continued)

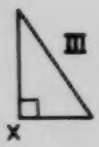
Item 1.3.7 (34):

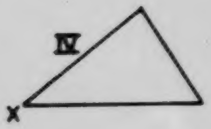
The greatest common factor of 24 and 30 is:	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 2	8				9
B) 6	78	66	75	87	73
C) 120	10				11
D) 60	1				3
E) I don't know	1				3
Missing	1				1
Multiple	*				*

Item 1.3.8 (39):









In which triangle is angle X an obtuse angle?	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) I	62	35	51	88	40
B) II	8				12
C) III	10				26
D) IV	5				8
E) I don't know	14				12
Missing	*				1
Multiple	*				1

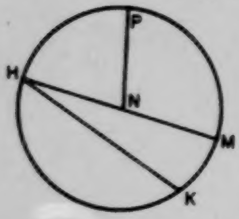
* indicates 0.5%

Grade/Year 12 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Knowledge of Notation and Terminology

Item 1.3.9 (40):



If N is the centre, which segment is a diameter?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) $\overline{HK}$	1				5
B) $\overline{NP}$	14				18
C) $\overline{HP}$	2				5
D) $\overline{HM}$	78	66	77	86	63
E) I don't know	4				8
Missing	*				1
Multiple	*				1

Item 1.3.10 (42):

Which one of these has a shape most like a basketball?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) Cone	2				6
B) Cylinder	5				14
C) Cube	2				3
D) Sphere	89	80	87	95	72
E) I don't know	1				3
Missing	*				1
Multiple	1				1

* indicates <0.5%

Grade/Year 12 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Knowledge of Notation and Terminology (continued)

Item 1.3.11 (44):

The reciprocal of $\frac{3}{4}$ is:

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) $\frac{4}{3}$	90	74	89	98	80
B) $1 \div \frac{4}{3}$	2				5
C) $\frac{1}{4}$	2				4
D) 1	1				2
E) I don't know	4				8
Missing	*				1
Multiple	*				1

Item 1.3.12 (45):

Which one of the following is a prime number?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 36	22				21
B) 35	3				7
C) 39	5				11
D) 37	65	38	60	84	53
E) I don't know	5				7
Missing	*				1
Multiple	*				1

* indicates < 0.5%

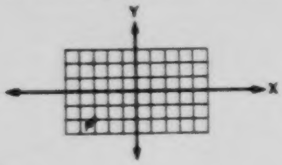
Grade/Year 12 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.3: Knowledge of Notation and Terminology (continued)

Item 1.3.13 (51):

The coordinates of point P are:



	Total Grade 12	Math 10	Math 11	Math 12
A) (3, 2)	4			
B) (−2, −3)	10			
C) (2, 3)	3			
D) (−3, −2)	72	37	66	94
E) I don't know	10			
Missing	1			
Multiple	*			

Item 1.3.14 (62):

Find the roots of the equation:

$$(x - 1)(x + 7) = 0$$

	Total Grade 12	Math 10	Math 11	Math 12
A) 1, −7	60	28	48	91
B) 1, 7	6			
C) −1, −7	6			
D) −1, 7	13			
E) I don't know	14			
Missing	1			
Multiple	*			

* indicates < 0.5%

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Other Algorithms

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Total	23,136	73	3,506	48	10,607	67	8,576	91
19 years or older	1,389	59	318	41	708	57	307	86
18 years	7,127	70	1,194	46	3,438	64	2,334	90
17 years	13,993	76	1,919	51	6,252	69	5,647	91
16 years or younger	477	80	46	44	157	75	256	93
Male	11,069	76	1,211	52	4,790	67	4,866	91
Female	11,831	70	2,251	46	5,727	67	3,648	90
One or two schools attended	2,937	73	426	49	1,317	66	1,155	91
Three schools attended	6,304	73	954	48	2,873	67	2,381	91
Four schools attended	5,231	74	797	49	2,431	68	1,921	91
Five schools attended	3,399	73	495	48	1,535	67	1,311	90
Six schools attended	2,020	73	302	49	923	67	748	91
Seven schools attended	1,218	73	188	47	593	68	417	91
Eight or more schools attended	1,856	69	319	46	868	66	600	89
Use a hand-held calculator at home	11,708	77	1,292	49	4,577	68	5,650	91
Do not use a hand-held calculator at home	11,122	68	2,170	48	5,887	66	2,851	90
Use a hand-held calculator for homework	12,889	79	1,200	51	4,791	68	6,698	92
Do not use a hand-held calculator for homework	9,901	66	2,220	47	5,665	66	1,819	88
Use a hand-held calculator in school	11,846	79	1,019	52	4,280	68	6,366	92
Do not use a hand-held calculator in school	10,982	66	2,430	47	6,177	66	2,157	89
Mathematics course semestered	13,688	74	1,687	49	6,463	67	5,293	91
Mathematics course not semestered	9,036	71	1,735	48	3,960	67	3,189	91

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Other Algorithms (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
No time spent on mathematics assignments	1,672	65	380	40	760	62	472	90
Less than 30 minutes spent on mathematics assignments	4,252	84	179	55	1,151	70	2,865	91
30 minutes or more/day spent on mathematics assignments	4,338	85	113	55	886	70	3,289	90
Do not have a part-time job	10,451	73	1,658	47	4,682	67	3,931	91
Have a part-time job on weekends only	4,229	74	571	49	1,864	67	1,723	91
Have a part-time job on weekdays only	1,119	73	182	48	484	66	432	92
Have a part-time job on both weekends and weekdays	7,090	72	1,046	49	3,482	67	2,451	90
Spend less than 5 hours on part-time job	1,136	75	157	45	474	68	487	91
Spend 5 - 10 hours on part-time job	3,518	74	476	50	1,538	67	1,434	91
Spend 10 - 20 hours on part-time job	5,232	74	733	50	2,499	68	1,936	91
Spend more than 20 hours on part-time job	2,444	68	427	48	1,263	64	704	89
Father's Education:								
Elementary school	2,639	71	491	48	1,254	67	842	92
Junior secondary school	4,377	71	777	48	2,150	67	1,386	91
Senior secondary school	4,495	71	728	46	2,114	66	1,577	90
Trade or vocational training	2,258	76	264	52	1,013	69	945	92
Technical training or some university	2,215	77	235	51	927	69	1,030	90
Completed university	2,525	81	181	49	867	71	1,442	92
Mother's Education:								
Elementary school	1,887	72	335	47	845	68	661	92
Junior secondary school	4,558	71	868	48	2,212	67	1,406	91
Senior secondary school	7,342	72	1,127	47	3,485	66	2,626	91
Trade or vocational training	1,767	77	195	52	786	69	757	92
Technical training or some university	2,256	78	214	50	902	70	1,111	91
Completed university	1,560	79	124	50	575	69	834	91

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Other Algorithms (continued)

Reporting Category	Total		Math 10		Math 11		Math 12.	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Plans After Leaving Secondary School:								
Look for a job	4,447	62	1,201	47	2,526	64	621	87
Business, vocational, art or trade training	2,567	64	539	48	1,546	64	429	85
Technical institute	1,470	81	100	56	511	71	842	90
Community college: university transfer	2,350	80	135	50	960	71	1,247	91
Community college: career program	1,845	68	339	46	1,010	66	460	88
University	4,896	87	115	56	1,257	75	3,478	93
Other plans	2,111	66	482	48	1,111	65	446	90
Undecided	3,110	71	526	48	1,548	67	985	90
Born in Canada	12,198	74	1,793	49	5,637	68	4,597	91
Not born in Canada	1,779	78	187	49	680	67	879	92
Two years or less in Canada	331	83	20	41	96	73	204	93
3 - 4 years in Canada	221	80	22	49	73	67	122	94
5 years or more in Canada	1,195	76	141	50	489	66	549	92
English spoken before starting Grade 1	11,395	73	1,681	48	5,323	67	4,226	91
Other language spoken before starting Grade 1	2,384	76	364	49	1,122	67	1,302	92
English usually spoken in the home	12,909	73	1,898	49	5,990	67	4,829	91
Other language usually spoken in the home	1,569	77	196	48	577	67	768	92
Non-Canadian, non-English	658	81	59	47	197	68	390	94
Canadian, non-English	577	76	86	50	233	69	249	91
1st generation Canadian	193	70	31	46	89	65	69	87
Non-Canadian, English	719	74	88	48	336	67	286	92
Canadian, English	9,956	74	1,457	49	4,636	68	3,725	91

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Other Algorithms (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Do not usually watch television	1,289	76	166	50	567	70	538	92
Watch T.V. less than 1 hour/day	1,615	80	163	55	609	70	818	92
Watch T.V. about 1 hour/day	2,572	78	310	52	1,105	70	1,123	92
Watch T.V. about 2 hours/day	3,637	74	499	48	1,624	68	1,461	91
Watch T.V. about 3 hours/day	2,774	71	453	49	1,363	65	925	90
Watch T.V. about 4 hours/day	1,685	68	302	46	868	64	478	90
Watch T.V. 5 hours or more/day	899	65	192	40	440	62	251	90
Usually read a newspaper every day	5,638	76	678	50	2,514	68	2,372	92
Read a newspaper 3 - 4 times/week	3,514	74	494	48	1,543	68	1,424	92
Read a newspaper once/week	3,198	72	545	47	1,496	66	1,113	91
Read a newspaper once/month	502	72	78	48	235	68	180	90
Hardly ever read a newspaper	1,635	69	296	47	782	64	518	89
Hardly ever read a magazine	2,060	68	392	46	982	64	630	90
Read a magazine once/month	2,665	74	387	48	1,226	67	1,017	91
Read a magazine 1 - 2 times/week	6,749	75	885	50	3,040	68	2,734	91
Read a magazine 3 - 4 times/week	2,996	75	423	48	1,313	68	1,223	92
Read 0 - 2 books/year	2,518	68	486	47	1,235	65	746	90
Read 3 - 5 books/year	3,112	72	430	46	1,452	65	1,179	91
Read 6 - 8 books/year	2,251	76	286	52	974	67	958	92
Read 1 book/month	2,197	75	300	50	966	68	911	92
Read 2 books/month	2,323	76	272	48	1,037	68	981	92
Read 1 book/week	1,224	76	182	50	533	70	490	92
Read more than 1 book/week	900	76	138	50	398	72	351	92

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Other Algorithms (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Father's Occupation:								
Clerical	240	77	27	51	104	68	104	92
Deceased	498	71	86	51	238	64	163	94
Farmer	435	72	68	47	199	66	159	92
Managerial	3,246	74	411	49	1,473	67	1,318	91
Mining, logging, fishing, farmwork	1,124	67	197	46	598	64	313	89
Professional	1,306	82	92	55	440	71	761	92
Retired	532	73	96	51	258	68	175	93
Sales	687	77	95	50	267	69	317	91
Semi-skilled	881	72	141	48	420	66	310	92
Service	543	76	76	42	228	70	236	93
Skilled	2,461	72	391	48	1,159	67	869	91
Technical	392	76	46	54	158	68	179	90
Transport, communications	412	72	61	50	205	65	141	91
Unskilled	436	75	64	51	193	67	173	93
Other	1,124	71	202	45	548	67	351	91

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Other Algorithms (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Mother's Occupation:								
Clerical	1,994	74	263	48	949	69	749	91
Deceased	158	76	26	50	76	71	53	95
Farmer	116	68	17	43	55	58	41	92
Homemaker	6,529	74	962	48	2,867	67	2,616	91
Managerial	647	75	85	53	316	69	236	92
Professional	896	79	67	49	374	69	445	91
Retired	188	68	43	42	87	66	57	92
Sales	549	75	76	51	268	68	201	93
Semi-skilled	334	74	53	46	120	66	157	92
Service, recreation	489	71	96	48	228	68	156	91
Skilled	203	75	30	56	100	68	73	94
Technical	278	76	29	54	121	66	126	90
Transport, communications	97	77	9	52	47	72	39	90
Unskilled	422	76	55	54	201	69	158	93
Other	1,479	68	252	46	722	63	468	90

Grade/Year 12 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Other Algorithms

Item 1.4.1 (4):

Simplify: $(-2) \times (-3) =$

	Total Grade 12	Math 10	Math 11	Math 12
A) −6	13			
B) 6	81	51	79	97
C) −5	2			
D) 5	2			
E) I don't know	1			
Missing	1			
Multiple	*			

Item 1.4.2 (6):

Simplify: $(-5) - (-9) =$

	Total Grade 12	Math 10	Math 11	Math 12
A) 14	4			
B) 4	66	37	58	90
C) −14	16			
D) − 4	11			
E) I don't know	2			
Missing	1			
Multiple	1			

Item 1.4.3 (13):

Written as a percent, $\frac{1}{5} =$

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 5%	7				19
B) 0.5%	12				19
C) 20%	79	56	75	94	55
D) 50%	1				2
E) I don't know	1				2
Missing	1				1
Multiple	*				1

* indicates <0.5%

Grade/Year 12 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Other Algorithms (continued)

Item 1.4.4 (16):

Simplify: $3^5 \times 3^2 =$

	Total Grade 12	Math 10	Math 11	Math 12
A) 9^{10}	8			
B) 3^{10}	5			
C) 3^7	59	27	48	86
D) 9^7	24			
E) I don't know	4			
Missing	1			
Multiple	*			

Item 1.4.5 (31):

Written as a decimal, $\frac{1}{8} =$

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 0.12	7				4
B) 0.8	18				41
C) 0.125	67	42	61	87	38
D) 0.18	3				8
E) I don't know	3				5
Missing	1				1
Multiple	*				*

Item 1.4.6 (35):

Written as a decimal, 20% =

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 0.2	65	39	57	86	47
B) 0.02	10				17
C) 2.0	4				12
D) 20.0	18				17
E) I don't know	2				5
Missing	*				2
Multiple	*				*

* indicates <0.5%

Grade/Year 12 - Test Results by Item

DOMAIN I: COMPUTATION AND KNOWLEDGE

Objective 1.4: Knowledge of Other Algorithms (continued)

Item 1.4.7 (46):

In lowest terms, $\frac{24}{30}$ =

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) $\frac{8}{10}$	2				4
B) $\frac{12}{15}$	4				11
C) $\frac{4}{5}$	92	84	91	97	80
D) $\frac{5}{4}$	1				2
E) I don't know	*				2
Missing	1				1
Multiple	*				1

* indicates $<$ 0.5%

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.1: Number Concepts

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Total	23,136	68	3,506	49	10,607	62	8,576	83
19 years or older	1,389	55	318	42	708	54	307	75
18 years	7,127	65	1,194	47	3,438	60	2,334	82
17 years	13,993	70	1,919	51	6,252	64	5,647	84
16 years or younger	477	75	46	50	157	68	256	86
Male	11,069	73	1,211	55	4,790	66	4,866	84
Female	11,831	63	2,251	46	5,727	59	3,648	81
One or two schools attended	2,937	68	426	47	1,317	62	1,155	83
Three schools attended	6,304	68	954	49	2,873	61	2,381	84
Four schools attended	5,231	68	797	50	2,431	63	1,921	83
Five schools attended	3,399	68	495	49	1,535	63	1,311	83
Six schools attended	2,020	68	302	50	923	64	748	82
Seven schools attended	1,218	68	188	50	593	65	417	84
Eight or more schools attended	1,856	65	319	48	868	61	600	82
Use a hand-held calculator at home	11,708	71	1,292	50	4,577	63	5,650	84
Do not use a hand-held calculator at home	11,122	64	2,170	49	5,887	62	2,851	82
Use a hand-held calculator for homework	12,889	73	1,200	50	4,791	63	6,698	84
Do not use a hand-held calculator for homework	9,901	62	2,220	48	5,665	62	1,819	81
Use a hand-held calculator in school	11,846	73	1,019	51	4,280	64	6,366	84
Do not use a hand-held calculator in school	10,982	62	2,430	48	6,177	62	2,157	81
Mathematics course semestered	13,688	69	1,687	50	6,463	62	5,293	83
Mathematics course not semestered	9,036	67	1,735	48	3,960	62	3,189	84

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.1: Number Concepts (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
No time spent on mathematics assignments	1,672	62	380	43	760	59	472	84
Less than 30 minutes spent on mathematics assignments	4,252	77	179	52	1,151	64	2,865	85
30 minutes or more/day spent on mathematics assignments	4,338	76	113	49	886	62	3,289	81
Do not have a part-time job	10,451	68	1,658	48	4,682	62	3,931	84
Have a part-time job on weekends only	4,229	68	571	48	1,864	62	1,723	82
Have a part-time job on weekdays only	1,119	68	182	50	484	61	432	84
Have a part-time job on both weekends and weekdays	7,090	68	1,046	51	3,482	63	2,451	83
Spend less than 5 hours on part-time job	1,136	69	157	45	474	62	487	84
Spend 5 - 10 hours on part-time job	3,518	68	476	49	1,538	62	1,434	82
Spend 10 - 20 hours on part-time job	5,232	68	733	50	2,499	63	1,936	83
Spend more than 20 hours on part-time job	2,444	66	427	52	1,263	63	704	82
Father's Education:								
Elementary school	2,639	66	491	50	1,254	62	842	84
Junior secondary school	4,377	66	777	49	2,150	62	1,386	83
Senior secondary school	4,495	66	728	47	2,114	62	1,577	82
Trade or vocational training	2,258	71	264	55	1,013	64	945	83
Technical training or some university	2,215	72	235	51	927	64	1,030	83
Completed university	2,525	76	181	51	867	67	1,442	85
Mother's Education:								
Elementary school	1,887	66	335	48	845	61	661	83
Junior secondary school	4,558	66	868	50	2,212	62	1,406	83
Senior secondary school	7,342	68	1,127	49	3,485	62	2,626	82
Trade or vocational training	1,767	70	195	53	786	63	757	83
Technical training or some university	2,256	74	214	52	902	66	1,111	85
Completed university	1,560	75	124	52	575	67	834	84

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.1: Number Concepts (continued)

Reporting Category	Total N	Total Mean % Correct	Math 10 N	Math 10 Mean % Correct	Math 11 N	Math 11 Mean % Correct	Math 12 N	Math 12 Mean % Correct
Plans After Leaving Secondary School:								
Look for a job	4,447	59	1,201	47	2,526	60	621	79
Business, vocational, art or trade training	2,567	61	539	50	1,546	61	429	77
Technical institute	1,470	74	100	57	511	66	842	82
Community college: university transfer	2,350	74	135	52	960	65	1,247	83
Community college: career program	1,845	62	339	48	1,010	60	460	80
University	4,896	81	115	53	1,257	70	3,478	86
Other plans	2,111	62	482	49	1,111	61	446	82
Undecided	3,110	66	526	50	1,548	62	985	82
Born in Canada	12,198	69	1,793	50	5,637	63	4,597	84
Not born in Canada	1,779	71	187	46	680	62	879	83
Two years or less in Canada	331	76	20	47	96	66	204	84
3 - 4 years in Canada	221	70	22	48	73	61	122	82
5 years or more in Canada	1,195	70	141	46	489	62	549	83
English spoken before starting Grade 1	11,395	69	1,681	49	5,323	63	4,226	84
Other language spoken before starting Grade 1	2,384	70	364	49	1,122	61	1,302	83
English usually spoken in the home	12,909	69	1,898	50	5,990	63	4,829	84
Other language usually spoken in the home	1,569	69	196	46	577	61	768	82
Non-Canadian, non-English	658	71	59	42	197	60	390	82
Canadian, non-English	577	68	86	50	233	59	249	83
1st generation Canadian	193	67	31	47	89	64	69	81
Non-Canadian, English	719	71	88	47	336	65	286	85
Canadian, English	9,956	69	1,457	50	4,636	63	3,725	84

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.1: Number Concepts (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Do not usually watch television	1,289	72	166	53	567	66	538	85
Watch T.V. less than 1 hour/day	1,615	75	163	54	609	68	818	85
Watch T.V. about 1 hour/day	2,572	72	310	52	1,105	66	1,123	85
Watch T.V. about 2 hours/day	3,637	69	499	48	1,624	63	1,461	84
Watch T.V. about 3 hours/day	2,774	66	453	50	1,363	61	925	83
Watch T.V. about 4 hours/day	1,685	63	302	46	868	59	478	81
Watch T.V. 5 hours or more/day	899	61	192	44	440	57	251	82
Usually read a newspaper every day	5,638	71	678	51	2,514	64	2,372	86
Read a newspaper 3 - 4 times/week	3,514	70	494	50	1,543	64	1,424	84
Read a newspaper once/week	3,198	66	545	48	1,496	62	1,113	82
Read a newspaper once/month	502	68	78	52	235	64	180	82
Hardly ever read a newspaper	1,635	63	296	47	782	58	518	81
Hardly ever read a magazine	2,060	63	392	45	982	59	630	81
Read a magazine once/month	2,665	68	387	49	1,226	61	1,017	84
Read a magazine 1 - 2 times/week	6,749	70	885	51	3,040	64	2,734	84
Read a magazine 3 - 4 times/week	2,996	71	423	50	1,313	65	1,223	85
Read 0 - 2 books/year	2,518	64	486	47	1,235	60	746	83
Read 3 - 5 books/year	3,112	68	430	48	1,452	62	1,179	83
Read 6 - 8 books/year	2,251	71	286	53	974	64	958	85
Read 1 book/month	2,197	69	300	49	966	62	911	83
Read 2 books/month	2,323	71	272	50	1,037	64	981	84
Read 1 book/week	1,224	70	182	50	533	65	490	85
Read more than 1 book/week	900	71	138	52	398	66	351	85

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.1: Number Concepts (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Father's Occupation:								
Clerical	240	74	27	52	104	67	104	87
Deceased	498	66	86	49	238	61	163	85
Farmer	435	68	68	49	199	63	159	84
Managerial	3,246	69	411	48	1,473	63	1,318	84
Mining, logging, fishing, farmwork	1,124	63	197	44	598	60	313	81
Professional	1,306	77	92	58	440	67	761	86
Retired	532	68	96	51	258	63	175	84
Sales	687	73	95	51	267	68	317	83
Semi-skilled	881	66	141	47	420	60	310	82
Service	543	70	76	44	228	64	236	86
Skilled	2,461	68	391	52	1,159	63	869	84
Technical	392	70	46	55	158	64	179	81
Transport, communications	412	68	61	47	205	63	141	85
Unskilled	436	68	64	47	193	60	173	84
Other	1,124	66	202	47	548	61	351	83

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.1: Number Concepts (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Mother's Occupation:								
Clerical	1,994	71	263	53	949	65	749	85
Deceased	158	70	26	50	76	66	53	85
Farmer	116	64	17	48	55	54	41	85
Homemaker	6,529	69	962	49	2,867	63	2,616	84
Managerial	647	68	85	53	316	61	236	83
Professional	896	75	67	51	374	66	445	85
Retired	188	64	43	46	87	62	57	80
Sales	549	69	76	46	268	63	201	86
Semi-skilled	334	68	53	44	120	60	157	83
Service, recreation	489	65	96	46	228	63	156	82
Skilled	203	67	30	51	100	61	73	82
Technical	278	71	29	56	121	62	126	84
Transport, communications	97	68	9	44	47	63	39	81
Unskilled	422	70	55	50	201	65	158	84
Other	1,479	64	252	47	722	59	468	83

Grade/Year 12 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.1: Number Concepts

Item 2.1.1 (12):

Simplify: $\frac{0}{6} =$

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 0	62	44	55	78	42
B) Infinity	3				3
C) 6	5				14
D) Cannot be done	27				36
E) I don't know	2				5
Missing	*				*
Multiple	1				1

Item 2.1.2 (14):

Which number is the SMALLEST?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 0.022	86	78	83	94	69
B) 2.002	6				12
C) 0.202	1				4
D) 0.220	6				12
E) I don't know	1				1
Missing	1				*
Multiple	*				1

Item 2.1.3 (18):

There are 13 boys and 15 girls in a group. What fraction of the group is boys?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) $\frac{15}{28}$	5				5
B) $\frac{13}{15}$	38				53
C) $\frac{15}{13}$	4				6
D) $\frac{13}{28}$	51	35	45	66	32
E) I don't know	1				2
Missing	1				1
Multiple	*				*

* indicates $<0.5\%$

Grade/Year 12 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.1: Number Concepts (continued)

Item 2.1.4 (32):

What whole number is closest to $\sqrt{52}$?

	Total Grade 12	Math 10	Math 11	Math 12
A) 25	4			
B) 8	6			
C) 52	8			
D) 7	73	39	69	95
E) I don't know	7			
Missing	*			
Multiple	*			

Item 2.1.5 (47):

Which number is largest?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) $\frac{2}{3}$	21				38
B) $\frac{4}{5}$	59	37	51	79	29
C) $\frac{3}{4}$	13				16
D) $\frac{5}{8}$	5				12
E) I don't know	1				2
Missing	1				1
Multiple	1				1

Item 2.1.6 (50):

As of 1 June 1976, the population of Canada was 22 588 416. Round off 22 588 416 to the nearest ten thousand.

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 22 580 000	5				10
B) 23 000 000	7				10
C) 22 600 000	12				15
D) 22 590 000	75	60	71	87	59
E) I don't know	1				5
Missing	1				1
Multiple	*				*

* indicates <0.5%

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.2: Measurement Concepts

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Total	23,136	79	3,506	66	10,607	76	8,576	88
19 years or older	1,389	69	318	59	708	69	307	75
18 years	7,127	77	1,194	65	3,438	75	2,334	82
17 years	13,993	81	1,919	68	6,252	77	5,647	84
16 years or younger	477	82	46	59	157	80	256	86
Male	11,069	84	1,211	73	4,790	80	4,866	90
Female	11,831	75	2,251	62	5,727	72	3,648	86
One or two schools attended	2,937	80	426	67	1,317	76	1,155	89
Three schools attended	6,304	79	954	66	2,873	75	2,381	88
Four schools attended	5,231	79	797	66	2,431	76	1,921	89
Five schools attended	3,399	79	495	65	1,535	76	1,311	89
Six schools attended	2,020	81	302	68	923	78	748	89
Seven schools attended	1,218	79	188	64	593	77	417	90
Eight or more schools attended	1,856	76	319	65	868	75	600	87
Use a hand-held calculator at home	11,708	82	1,292	67	4,577	77	5,650	89
Do not use a hand-held calculator at home	11,122	76	2,170	65	5,887	75	2,851	88
Use a hand-held calculator for homework	12,889	82	1,200	67	4,791	77	6,698	89
Do not use a hand-held calculator for homework	9,901	75	2,220	66	5,665	75	1,819	86
Use a hand-held calculator in school	11,846	83	1,019	67	4,280	77	6,366	89
Do not use a hand-held calculator in school	10,982	75	2,430	66	6,177	75	2,157	86
Mathematics course semestered	13,688	80	1,687	67	6,463	76	5,293	88
Mathematics course not semestered	9,036	78	1,735	65	3,960	76	3,189	89

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.2: Measurement Concepts (continued)

Reporting Category	Total N	Total Mean % Correct	Math 10 N	Math 10 Mean % Correct	Math 11 N	Math 11 Mean % Correct	Math 12 N	Math 12 Mean % Correct
No time spent on mathematics assignments	1,672	74	380	62	760	73	472	88
Less than 30 minutes spent on mathematics assignments	4,252	85	179	67	1,151	77	2,865	90
30 minutes or more/day spent on mathematics assignments	4,338	84	113	66	886	76	3,289	88
Do not have a part-time job	10,451	79	1,658	66	4,682	75	3,931	89
Have a part-time job on weekends only	4,229	80	571	66	1,864	76	1,723	88
Have a part-time job on weekdays only	1,119	79	182	64	484	76	432	89
Have a part-time job on both weekends and weekdays	7,090	79	1,046	67	3,482	77	2,451	89
Spend less than 5 hours on part-time job	1,136	80	157	63	474	77	487	89
Spend 5 - 10 hours on part-time job	3,518	80	476	67	1,538	76	1,434	88
Spend 10 - 20 hours on part-time job	5,232	80	733	66	2,499	77	1,936	89
Spend more than 20 hours on part-time job	2,444	78	427	67	1,263	77	704	88
Father's Education:								
Elementary school	2,639	78	491	66	1,254	75	842	89
Junior secondary school	4,377	78	777	64	2,150	75	1,386	89
Senior secondary school	4,495	78	728	67	2,114	76	1,577	88
Trade or vocational training	2,258	83	264	74	1,013	79	945	90
Technical training or some university	2,215	82	235	68	927	79	1,030	88
Completed university	2,525	85	181	70	867	80	1,442	90
Mother's Education:								
Elementary school	1,887	78	335	64	845	75	661	90
Junior secondary school	4,558	78	868	65	2,212	76	1,406	88
Senior secondary school	7,342	79	1,127	66	3,485	76	2,626	89
Trade or vocational training	1,767	81	195	69	786	77	757	89
Technical training or some university	2,256	83	214	70	902	79	1,111	89
Completed university	1,560	84	124	74	575	79	834	88

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.2: Measurement Concepts (continued)

Reporting Category	Total N	Total Mean % Correct	Math 10 N	Math 10 Mean % Correct	Math 11 N	Math 11 Mean % Correct	Math 12 N	Math 12 Mean % Correct
Plans After Leaving Secondary School:								
Look for a job	4,447	72	1,201	65	2,526	72	621	85
Business, vocational, art or trade training	2,567	76	539	66	1,546	77	429	85
Technical institute	1,470	85	100	76	511	80	842	88
Community college: university transfer	2,350	83	135	70	960	79	1,247	88
Community college: career program	1,845	76	339	65	1,010	75	460	86
University	4,896	88	115	70	1,257	82	3,478	91
Other plans	2,111	76	482	65	1,111	76	446	88
Undecided	3,110	76	526	66	1,548	74	985	87
Born in Canada	12,198	80	1,793	66	5,637	76	4,597	90
Not born in Canada	1,779	81	187	67	680	77	879	88
Two years or less in Canada	331	81	20	64	96	75	204	86
3 - 4 years in Canada	221	80	22	66	73	74	122	87
5 years or more in Canada	1,195	82	141	68	489	79	549	89
English spoken before starting Grade 1	11,395	79	1,681	65	5,323	76	4,226	89
Other language spoken before starting Grade 1	2,384	82	364	69	1,122	77	1,302	90
English usually spoken in the home	12,909	80	1,898	66	5,990	76	4,829	90
Other language usually spoken in the home	1,569	81	196	70	577	77	768	88
Non-Canadian, non-English	658	82	59	69	197	77	390	87
Canadian, non-English	577	82	86	74	233	76	249	90
1st generation Canadian	193	80	31	64	89	79	69	88
Non-Canadian, English	719	81	88	68	336	78	286	88
Canadian, English	9,956	79	1,457	66	4,636	76	3,725	89

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.2: Measurement Concepts (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Do not usually watch television	1,289	81	166	70	567	76	538	90
Watch T.V. less than 1 hour/day	1,615	84	163	71	609	79	818	90
Watch T.V. about 1 hour/day	2,572	83	310	68	1,105	80	1,123	90
Watch T.V. about 2 hours/day	3,637	81	499	66	1,624	78	1,461	90
Watch T.V. about 3 hours/day	2,774	78	453	67	1,363	75	925	88
Watch T.V. about 4 hours/day	1,685	75	302	63	868	73	478	86
Watch T.V. 5 hours or more/day	899	72	192	58	440	70	251	86
Usually read a newspaper every day	5,638	82	678	68	2,514	78	2,372	90
Read a newspaper 3 - 4 times/week	3,514	80	494	66	1,543	77	1,424	89
Read a newspaper once/week	3,198	78	545	65	1,496	75	1,113	88
Read a newspaper once/month	502	76	78	69	235	74	180	87
Hardly ever read a newspaper	1,635	74	296	62	782	71	518	85
Hardly ever read a magazine	2,060	74	392	62	982	72	630	86
Read a magazine once/month	2,665	78	387	67	1,226	74	1,017	88
Read a magazine 1 - 2 times/week	6,749	81	885	66	3,040	78	2,734	90
Read a magazine 3 - 4 times/week	2,996	82	423	69	1,313	78	1,223	91
Read 0 - 2 books/year	2,518	76	486	63	1,235	74	746	88
Read 3 - 5 books/year	3,112	80	430	66	1,452	77	1,179	89
Read 6 - 8 books/year	2,251	81	286	69	974	77	958	89
Read 1 book/month	2,197	81	300	70	966	76	911	90
Read 2 books/month	2,323	81	272	65	1,037	76	981	90
Read 1 book/week	1,224	81	182	68	533	77	490	90
Read more than 1 book/week	900	80	138	64	398	76	351	91

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.2: Measurement Concepts (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Father's Occupation:								
Clerical	240	82	27	66	104	77	104	90
Deceased	498	76	86	60	238	74	163	88
Farmer	435	80	68	66	199	77	159	90
Managerial	3,246	81	411	67	1,473	78	1,318	89
Mining, logging, fishing, farmwork	1,124	75	197	65	598	72	313	88
Professional	1,306	86	92	72	440	80	761	91
Retired	532	80	96	69	258	77	175	90
Sales	687	81	95	65	267	79	317	89
Semi-skilled	881	78	141	62	420	76	310	89
Service	543	82	76	66	228	77	236	92
Skilled	2,461	80	391	68	1,159	76	869	90
Technical	392	81	46	68	158	76	179	88
Transport, communications	412	79	61	66	205	77	141	88
Unskilled	436	78	64	63	193	75	173	88
Other	1,124	76	202	63	548	72	351	89

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.2: Measurement Concepts (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Mother's Occupation:								
Clerical	1,994	80	263	66	949	78	749	89
Deceased	158	79	26	62	76	78	53	90
Farmer	116	77	17	58	55	73	41	89
Homemaker	6,529	80	962	66	2,867	76	2,616	90
Managerial	647	81	85	68	316	77	236	90
Professional	896	83	67	70	374	79	445	88
Retired	188	74	43	60	87	73	57	85
Sales	549	81	76	68	268	77	201	91
Semi-skilled	334	81	53	67	120	77	157	90
Service, recreation	489	78	96	66	228	76	156	86
Skilled	203	80	30	63	100	78	73	91
Technical	278	82	29	70	121	78	126	90
Transport, communications	97	78	9	64	47	73	39	86
Unskilled	422	80	55	66	201	76	158	90
Other	1,479	76	252	63	722	73	468	87

Grade/Year 12 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.2: Measurement Concepts

Item 2.2.1 (19):
The temperature on a sunny summer day would most likely be:

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8	Grade 4
A) 5° Celsius	3				5	5
B) 25° Celsius	87	80	86	92	69	32
C) 55° Celsius	5				12	27
D) 85° Celsius	3				9	29
E) I don't know	2				4	6
Missing	1				1	1
Multiple	*				*	*

Item 2.2.2 (21):
A milk jug is likely to hold:

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8	Grade 4
A) 1 millilitre	1				2	6
B) 10 millilitres	2				5	10
C) 1 litre	90	82	89	96	84	67
D) 100 litres	2				4	7
E) I don't know	4				4	8
Missing	1				1	2
Multiple	*				1	*

Item 2.2.3 (22):
A ten-year-old boy is likely to weigh.

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8	Grade 4
A) 35 grams	3				10	9
B) 75 grams	6				13	22
C) 35 kilograms	54	40	49	67	45	25
D) 75 kilograms	19				19	33
E) I don't know	17				12	8
Missing	1				1	2
Multiple	*				1	*

* indicates <0.5%

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.3: Geometric Concepts

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Total	23,136	57	3,506	40	10,607	51	8,576	72
19 years or older	1,389	49	318	37	708	47	307	68
18 years	7,127	56	1,194	40	3,438	51	2,334	72
17 years	13,993	58	1,919	40	6,252	52	5,647	72
16 years or younger	477	62	46	35	157	56	256	73
Male	11,069	62	1,211	46	4,790	55	4,866	74
Female	11,831	52	2,251	36	5,727	48	3,648	69
One or two schools attended	2,937	57	426	38	1,317	50	1,155	72
Three schools attended	6,304	57	954	39	2,873	50	2,381	72
Four schools attended	5,231	57	797	41	2,431	52	1,921	72
Five schools attended	3,399	58	495	41	1,535	52	1,311	72
Six schools attended	2,020	57	302	40	923	51	748	72
Seven schools attended	1,218	57	188	38	593	53	417	72
Eight or more schools attended	1,856	55	319	38	868	51	600	72
Use a hand-held calculator at home	11,708	61	1,292	40	4,577	52	5,650	72
Do not use a hand-held calculator at home	11,122	53	2,170	40	5,887	50	2,851	70
Use a hand-held calculator for homework	12,889	62	1,200	41	4,791	53	6,698	73
Do not use a hand-held calculator for homework	9,901	51	2,220	40	5,665	50	1,819	68
Use a hand-held calculator in school	11,846	63	1,019	42	4,280	53	6,366	73
Do not use a hand-held calculator in school	10,982	51	2,430	39	6,177	50	2,157	68
Mathematics course semestered	13,688	58	1,687	40	6,463	52	5,293	71
Mathematics course not semestered	9,036	56	1,735	39	3,960	51	3,189	73

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.3: Geometric Concepts (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
No time spent on mathematics assignments	1,672	52	380	36	760	48	472	73
Less than 30 minutes spent on mathematics assignments	4,252	66	179	44	1,151	54	2,865	73
30 minutes or more/day spent on mathematics assignments	4,338	66	113	43	886	53	3,289	70
Do not have a part-time job	10,451	57	1,658	40	4,682	51	3,931	72
Have a part-time job on weekends only	4,229	58	571	39	1,864	52	1,723	71
Have a part-time job on weekdays only	1,119	57	182	39	484	51	432	73
Have a part-time job on both weekends and weekdays	7,090	57	1,046	40	3,482	52	2,451	72
Spend less than 5 hours on part-time job	1,136	58	157	36	474	51	487	72
Spend 5 - 10 hours on part-time job	3,518	58	476	41	1,538	52	1,434	71
Spend 10 - 20 hours on part-time job	5,232	57	733	39	2,499	52	1,936	71
Spend more than 20 hours on part-time job	2,444	55	427	42	1,263	51	704	72
Father's Education:								
Elementary school	2,639	56	491	40	1,254	52	842	72
Junior secondary school	4,377	55	777	41	2,150	51	1,386	70
Senior secondary school	4,495	55	728	38	2,114	50	1,577	72
Trade or vocational training	2,258	60	264	45	1,013	53	945	73
Technical training or some university	2,215	60	235	42	927	53	1,030	72
Completed university	2,525	64	181	40	867	54	1,442	73
Mother's Education:								
Elementary school	1,887	56	335	40	845	50	661	73
Junior secondary school	4,558	55	868	40	2,212	51	1,406	72
Senior secondary school	7,342	56	1,127	40	3,485	51	2,626	71
Trade or vocational training	1,767	59	195	43	786	51	757	71
Technical training or some university	2,256	61	214	40	902	53	1,111	73
Completed university	1,560	63	124	41	575	53	834	73

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.3: Geometric Concepts (continued)

Reporting Category	Total N	Total Mean % Correct	Math 10 N	Math 10 Mean % Correct	Math 11 N	Math 11 Mean % Correct	Math 12 N	Math 12 Mean % Correct
Plans After Leaving Secondary School:								
Look for a job	4,447	48	1,201	38	2,526	48	621	67
Business, vocational, art or trade training	2,567	51	539	40	1,546	51	429	67
Technical institute	1,470	64	100	51	511	54	842	71
Community college: university transfer	2,350	62	135	39	960	53	1,247	71
Community college: career program	1,845	52	339	39	1,010	50	460	67
University	4,896	69	115	45	1,257	56	3,478	75
Other plans	2,111	52	482	40	1,111	50	446	70
Undecided	3,110	55	526	40	1,548	51	985	70
Born in Canada	12,198	58	1,793	41	5,637	52	4,597	72
Not born in Canada	1,779	62	187	43	680	53	879	74
Two years or less in Canada	331	68	20	46	96	59	204	76
3 - 4 years in Canada	221	64	22	44	73	52	122	77
5 years or more in Canada	1,195	61	141	42	489	53	549	73
English spoken before starting Grade 1	11,395	58	1,681	40	5,323	52	4,226	72
Other language spoken before starting Grade 1	2,384	60	364	44	1,122	51	1,302	73
English usually spoken in the home	12,909	58	1,898	40	5,990	52	4,829	72
Other language usually spoken in the home	1,569	61	196	43	577	51	768	73
Non-Canadian, non-English	658	65	59	43	197	52	390	74
Canadian, non-English	577	58	86	44	233	49	249	72
1st generation Canadian	193	56	31	44	89	53	69	66
Non-Canadian, English	719	60	88	42	336	54	286	74
Canadian, English	9,956	58	1,457	40	4,636	52	3,725	72

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.3: Geometric Concepts (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Do not usually watch television	1,289	61	166	44	567	53	538	74
Watch T.V. less than 1 hour/day	1,615	63	163	46	609	55	818	74
Watch T.V. about 1 hour/day	2,572	61	310	44	1,105	54	1,123	73
Watch T.V. about 2 hours/day	3,637	58	499	39	1,624	52	1,461	72
Watch T.V. about 3 hours/day	2,774	56	453	41	1,363	51	925	71
Watch T.V. about 4 hours/day	1,685	53	302	38	868	48	478	70
Watch T.V. 5 hours or more/day	899	51	192	37	440	48	251	69
Usually read a newspaper every day	5,638	60	678	42	2,514	52	2,372	73
Read a newspaper 3 - 4 times/ week	3,514	58	494	40	1,543	52	1,424	72
Read a newspaper once/week	3,198	57	545	40	1,496	52	1,113	72
Read a newspaper once/month	502	58	78	42	235	53	180	72
Hardly ever read a newspaper	1,635	54	296	38	782	49	518	71
Hardly ever read a magazine	2,060	53	392	38	982	49	630	70
Read a magazine once/month	2,665	58	387	42	1,226	51	1,017	72
Read a magazine 1 - 2 times/ week	6,749	59	885	41	3,040	52	2,734	72
Read a magazine 3 - 4 times/ week	2,996	60	423	41	1,313	54	1,223	73
Read 0 - 2 books/year	2,518	54	486	40	1,235	51	746	71
Read 3 - 5 books/year	3,112	57	430	40	1,452	52	1,179	72
Read 6 - 8 books/year	2,251	60	286	41	974	53	958	73
Read 1 book/month	2,197	59	300	42	966	52	911	73
Read 2 books/month	2,323	59	272	41	1,037	51	981	73
Read 1 book/week	1,224	59	182	42	533	52	490	73
Read more than 1 book/week	900	58	138	40	398	52	351	72

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.3: Geometric Concepts (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Father's Occupation:								
Clerical	240	61	27	36	104	54	104	74
Deceased	498	56	86	39	238	49	163	76
Farmer	435	60	68	44	199	54	159	73
Managerial	3,246	58	411	39	1,473	52	1,318	72
Mining, logging, fishing, farmwork	1,124	54	197	40	598	50	313	71
Professional	1,306	65	92	46	440	54	761	74
Retired	532	58	96	44	258	53	175	74
Sales	687	60	95	40	267	52	317	73
Semi-skilled	881	57	141	39	420	52	310	71
Service	543	60	76	38	228	52	236	75
Skilled	2,461	57	391	42	1,159	52	869	72
Technical	392	59	46	41	158	52	179	71
Transport, communications	412	57	61	41	205	51	141	73
Unskilled	436	60	64	42	193	55	173	73
Other	1,124	54	202	39	548	50	351	69

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.3: Geometric Concepts (continued)

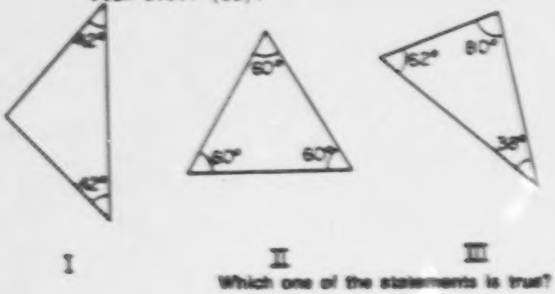
Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Mother's Occupation:								
Clerical	1,994	58	263	41	949	53	749	72
Deceased	158	60	26	41	76	54	53	78
Farmer	116	58	17	52	55	47	44	75
Homemaker	6,529	58	962	40	2,867	52	2,616	72
Managerial	647	56	85	38	316	51	236	71
Professional	896	63	67	46	374	54	445	73
Retired	188	54	43	35	87	50	57	74
Sales	549	58	76	41	268	52	201	74
Semi-skilled	334	59	53	38	120	47	157	76
Service, recreation	489	56	96	37	228	52	156	74
Skilled	203	58	30	42	100	50	73	76
Technical	278	59	29	42	121	51	126	72
Transport, communications	97	58	9	44	47	53	39	69
Unskilled	422	58	55	44	201	52	158	71
Other	1,479	55	252	42	722	50	468	70

Grade/Year 12 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.3: Geometric Concepts

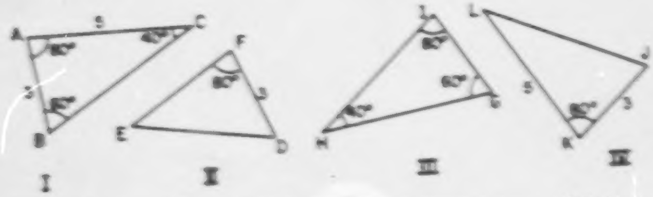
Item 2.3.1 (38):



42°
42°
60°
60°
60°
52°
90°
38°
I
II
III

Which one of the statements is true?	Total Grade 12	Math 10	Math 11	Math 12
A) I is an equilateral triangle	6			
B) II is an equilateral triangle	75	58	70	87
C) III is an isosceles triangle	6			
D) I is a scalene triangle	3			
E) I don't know	9			
Missing	1			
Multiple	*			

Item 2.3.2 (41):



A
5
C
40°
80°
5
60°
B
F
80°
3
E
D
I
80°
60°
40°
H
G
L
J
5
80°
3
K
I
II
III
IV

Which two triangles are congruent?	Total Grade 12	Math 10	Math 11	Math 12
A) I and IV	17	10	14	24
B) II and III	3			
C) I and III	65			
D) II and IV	4			
E) I don't know	10			
Missing	*			
Multiple	*			

* indicates < 0.5%

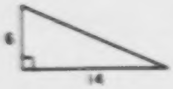
Grade/Year 12 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.3: Geometric Concepts (continued)

Item 2.3.3 (52):

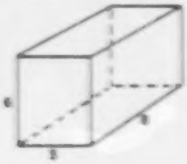
Find the area of this right triangle:



	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 42	55	24	42	83	24
B) 20	5				18
C) 84	26				42
D) 21	3				4
E) I don't know	10				11
Missing	1				1
Multiple	*				1

Item 2.3.4 (54):

Find the volume of this box:



	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 30	2				4
B) 40	3				8
C) 240	81	66	78	92	63
D) 19	3				13
E) I don't know	10				10
Missing	1				1
Multiple	*				1

* indicates <0.5%

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Total	23,136	64	3,506	37	10,607	56	8,576	86
19 years or older	1,389	48	318	30	708	45	307	78
18 years	7,127	60	1,194	35	3,438	53	2,334	85
17 years	13,993	67	1,919	39	6,252	59	5,647	86
16 years or younger	477	73	46	39	157	62	256	87
Male	11,069	67	1,211	40	4,790	56	4,866	86
Female	11,831	61	2,251	35	5,727	56	3,648	86
One or two schools attended	2,937	65	426	37	1,317	56	1,155	86
Three schools attended	6,304	64	954	37	2,873	56	2,381	86
Four schools attended	5,231	64	797	38	2,431	56	1,921	86
Five schools attended	3,399	64	495	36	1,535	56	1,311	85
Six schools attended	2,020	64	302	37	923	57	748	85
Seven schools attended	1,218	63	188	35	593	57	417	85
Eight or more schools attended	1,856	60	319	35	868	54	600	84
Use a hand-held calculator at home	11,708	69	1,292	37	4,577	57	5,650	87
Do not use a hand-held calculator at home	11,122	59	2,170	37	5,887	55	2,851	84
Use a hand-held calculator for homework	12,889	71	1,200	38	4,791	57	6,698	87
Do not use a hand-held calculator for homework	9,901	57	2,220	37	5,665	55	1,819	83
Use a hand-held calculator in school	11,846	72	1,019	40	4,280	58	6,366	87
Do not use a hand-held calculator in school	10,982	56	2,430	36	6,177	55	2,157	84
Mathematics course semestered	13,688	65	1,687	39	6,463	56	5,293	86
Mathematics course not semestered	9,036	62	1,735	36	3,960	56	3,189	86

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts (continued)

Reporting Category	Total N	Total Mean % Correct	Math 10 N	Math 10 Mean % Correct	Math 11 N	Math 11 Mean % Correct	Math 12 N	Math 12 Mean % Correct
No time spent on mathematics assignments	1,672	54	380	31	760	49	472	84
Less than 30 minutes spent on mathematics assignments	4,252	78	179	44	1,151	61	2,865	87
30 minutes or more/day spent on mathematics assignments	4,338	78	113	42	886	62	3,289	85
Do not have a part-time job	10,451	64	1,658	37	4,682	56	3,931	86
Have a part-time job on weekends only	4,229	66	571	38	1,864	56	1,723	86
Have a part-time job on weekdays only	1,119	64	182	38	484	54	432	88
Have a part-time job on both weekends and weekdays	7,090	63	1,046	38	3,482	56	2,451	85
Spend less than 5 hours on part-time job	1,136	66	157	33	474	56	487	88
Spend 5 - 10 hours on part-time job	3,518	66	476	38	1,538	56	1,434	86
Spend 10 - 20 hours on part-time job	5,232	65	733	38	2,499	57	1,936	85
Spend more than 20 hours on part-time job	2,444	59	427	38	1,263	53	704	83
Father's Education:								
Elementary school	2,639	61	491	36	1,254	55	842	86
Junior secondary school	4,377	61	777	37	2,150	54	1,386	86
Senior secondary school	4,495	63	728	36	2,114	56	1,577	85
Trade or vocational training	2,258	67	264	42	1,013	57	945	86
Technical training or some university	2,215	70	235	40	927	60	1,030	85
Completed university	2,525	75	181	40	867	62	1,442	87
Mother's Education:								
Elementary school	1,887	62	335	35	845	54	561	86
Junior secondary school	4,558	61	868	37	2,212	55	1,406	86
Senior secondary school	7,342	64	1,127	37	3,485	56	2,626	85
Trade or vocational training	1,767	68	195	41	786	58	757	86
Technical training or some university	2,256	71	214	38	902	60	1,111	87
Completed university	1,560	73	124	42	575	61	834	87

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Plans After Leaving Secondary School:								
Look for a job	4,447	50	1,201	35	2,526	51	621	81
Business, vocational, art or trade training	2,567	52	539	35	1,546	51	429	80
Technical institute	1,470	74	100	47	511	61	842	85
Community college: university transfer	2,350	74	135	43	960	63	1,247	86
Community college: career program	1,845	59	339	36	1,010	55	460	83
University	4,896	82	115	45	1,257	68	3,478	89
Other plans	2,111	55	482	39	1,111	52	446	82
Undecided	3,110	62	526	37	1,548	57	985	85
Born in Canada	12,198	65	1,793	38	5,637	57	4,597	87
Not born in Canada	1,779	69	187	37	680	57	879	86
Two years or less in Canada	331	76	20	41	96	63	204	87
3 - 4 years in Canada	221	72	22	40	73	59	122	88
5 years or more in Canada	1,195	67	141	37	489	56	549	85
English spoken before starting Grade 1	11,395	65	1,681	37	5,323	57	4,226	86
Other language spoken before starting Grade 1	2,384	68	364	39	1,122	56	1,302	86
English usually spoken in the home	12,909	65	1,898	38	5,990	57	4,829	86
Other language usually spoken in the home	1,569	68	196	37	577	56	768	86
Non-Canadian, non-English	658	73	59	39	197	58	390	87
Canadian, non-English	577	66	86	40	233	56	249	86
1st generation Canadian	193	62	31	29	89	55	69	85
Non-Canadian, English	719	66	88	36	336	58	286	86
Canadian, English	9,956	65	1,457	38	4,636	57	3,725	87

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts (continued)

Reporting Category	Total N	Total Mean % Correct	Math 10 N	Math 10 Mean % Correct	Math 11 N	Math 11 Mean % Correct	Math 12 N	Math 12 Mean % Correct
Do not usually watch television	1,289	68	166	39	567	59	538	87
Watch T.V. less than 1 hour/day	1,615	72	163	42	609	61	818	87
Watch T.V. about 1 hour/day	2,572	70	310	41	1,105	60	1,123	88
Watch T.V. about 2 hours/day	3,637	66	499	37	1,624	57	1,461	86
Watch T.V. about 3 hours/day	2,774	62	453	37	1,363	55	925	86
Watch T.V. about 4 hours/day	1,685	58	302	35	868	53	478	84
Watch T.V. 5 hours or more/day	899	56	192	33	440	50	251	85
Usually read a newspaper every day	5,638	68	678	39	2,514	59	2,372	87
Read a newspaper 3 - 4 times/week	3,514	66	494	38	1,543	57	1,424	86
Read a newspaper once/week	3,198	62	545	37	1,496	55	1,113	86
Read a newspaper once/month	502	64	78	35	235	57	180	86
Hardly ever read a newspaper	1,635	59	296	35	782	53	518	85
Hardly ever read a magazine	2,060	50	392	34	982	52	630	85
Read a magazine once/month	2,665	65	387	37	1,226	56	1,017	87
Read a magazine 1 - 2 times/week	6,749	67	885	39	3,040	58	2,734	87
Read a magazine 3 - 4 times/week	2,996	67	423	39	1,313	58	1,223	86
Read 0 - 2 books/year	2,518	58	486	36	1,235	52	746	84
Read 3 - 5 books/year	3,112	64	430	36	1,452	55	1,179	86
Read 6 - 8 books/year	2,251	67	286	38	974	58	958	86
Read 1 book/month	2,197	68	300	41	966	58	911	87
Read 2 books/month	2,323	68	272	39	1,037	58	981	88
Read 1 book/week	1,224	67	182	39	533	59	490	87
Read more than 1 book/week	900	67	138	37	398	59	351	89

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Father's Occupation:								
Clerical	240	67	27	39	104	56	104	86
Deceased	498	60	86	36	238	52	163	88
Farmer	435	63	68	38	199	55	159	86
Managerial	3,246	67	411	38	1,473	58	1,318	86
Mining, logging, fishing, farmwork	1,124	58	197	35	598	52	313	84
Professional	1,306	76	92	44	440	63	761	80
Retired	532	64	96	40	258	55	175	88
Sales	687	70	95	40	267	61	317	88
Semi-skilled	881	63	141	33	420	56	310	86
Service	543	68	76	36	228	58	236	88
Skilled	2,461	63	391	37	1,159	56	869	86
Technical	392	68	46	44	158	58	179	85
Transport, communications	412	64	61	39	205	56	141	86
Unskilled	436	65	64	39	193	55	173	87
Other	1,124	61	202	35	548	56	351	85

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Mother's Occupation:								
Clerical	1,994	67	263	39	949	60	749	86
Deceased	158	64	26	38	76	57	53	89
Farmer	116	60	17	35	55	48	41	88
Homemaker	6,529	66	962	37	2,867	56	2,616	87
Managerial	647	64	85	39	316	55	236	86
Professional	896	72	67	42	374	60	445	86
Retired	188	57	43	32	87	52	57	84
Sales	549	66	76	38	268	57	201	89
Semi-skilled	334	67	53	35	120	55	157	88
Service, recreation	489	62	96	37	228	56	156	86
Skilled	203	65	30	40	100	57	73	86
Technical	278	69	29	47	121	57	126	85
Transport, communications	97	65	9	30	47	57	39	84
Unskilled	422	66	55	43	201	56	158	88
Other	1,479	60	252	37	722	53	468	85

Grade/Year 12 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts

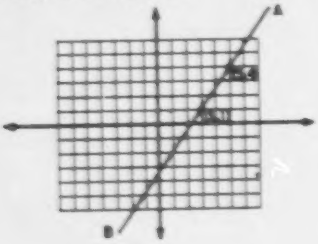
Item 2.4.1 (48):

Simplify: $30 - 4(8 - 2) =$

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 0	2				2
B) 20	7				25
C) 156	18				36
D) 6	67	32	58	92	18
E) I don't know	4				16
Missing	1				1
Multiple	*				1

Item 2.4.2 (55):

The slope of line AB is:



	Total Grade 12	Math 10	Math 11	Math 12
A) $\frac{3}{2}$	43	14	28	75
B) $-\frac{3}{2}$	6			
C) $\frac{2}{3}$	25			
D) $-\frac{2}{3}$	5			
E) I don't know	20			
Missing	1			
Multiple	*			

Item 2.4.3 (56):

If $x = 3$, what is the value of $x^2 - x$?

	Total Grade 12	Math 10	Math 11	Math 12
A) 6	83	60	82	95
B) 3	10			
C) 12	2			
D) 0	1			
E) I don't know	3			
Missing	1			
Multiple	*			

* indicates < 0.5%

02

Grade/Year 12 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts (continued)

Item 2.4.4 (57):

Solve: $3x - 3 = 12$.

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) $x = 7$	1				4
B) $x = 5$	82	70	82	88	68
C) $x = 4$	4				12
D) $x = 3$	9				7
E) I don't know	3				8
Missing	1				1
Multiple	*				1

Item 2.4.5 (61):

In factored form, $x^2 - 7x + 12 =$

	Total Grade 12	Math 10	Math 11	Math 12
A) $(x + 4)(x + 3)$	4			
B) $(x - 4)(x + 3)$	9			
C) $(x + 4)(x - 3)$	6			
D) $(x - 4)(x - 3)$	61	18	49	94
E) I don't know	19			
Missing	1			
Multiple	*			

Item 2.4.6 (63):

Solve for x and y: $x + 2y = 6$

$2x - y = 2$

	Total Grade 12	Math 10	Math 11	Math 12
A) $x = 4,\ y = 1$	10			
B) $x = 2,\ y = \frac{10}{3}$	6			
C) $x = 2,\ y = 2$	63	40	55	84
D) $x = \frac{8}{5},\ y = \frac{4}{5}$	4			
E) I don't know	15			
Missing	1			
Multiple	*			

* indicates <0.5%

Grade/Year 12 - Test Results by Item

DOMAIN 2: COMPREHENSION

Objective 2.4: Algebraic Concepts (continued)

Item 2.4.7 (64):

$r + s - (r - s) =$

	Total Grade 12	Math 10	Math 11	Math 12
A) 0	23			
B) $2r + 2s$	14			
C) $2r$	5			
D) $2s$	44	11	30	77
E) I don't know	12			
Missing	1			
Multiple	*			

Item 2.4.8 (67):

The cost of a new car is less than 4 times the cost of a used car. If x represents the cost of a new car, and y represents the cost of a used car, which one of these is true?

	Total Grade 12	Math 10	Math 11	Math 12
A) $x < 4y$	70	46	64	88
B) $x - y = 4$	4			
C) $y > 4x$	13			
D) $x = y + 4$	5			
E) I don't know	7			
Missing	2			
Multiple	*			

Item 2.4.9 (68):

> The formula to calculate simple interest is $I = Prt$ where I is the interest, P is the principal, r is the rate, and t is the time in years.

Find the interest on a principal of $1000 invested for two years at an annual rate of 7%.

	Total Grade 12	Math 10	Math 11	Math 12
A) $ 140	62	42	56	79
B) $1400	12			
C) $ 70	12			
D) $ 14	6			
E) I don't know	7			
Missing	2			
Multiple	*			

* indicates <0.5%

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals, and Percent

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Total	23,136	75	3,506	58	10,607	70	8,576	88
19 years or older	1,389	63	318	50	708	62	307	81
18 years	7,127	72	1,194	57	3,438	68	2,334	87
17 years	13,993	77	1,919	61	6,252	73	5,647	88
16 years or younger	477	80	46	55	157	75	256	89
Male	11,069	78	1,211	62	4,790	72	4,866	88
Female	11,831	72	2,251	57	5,727	69	3,648	88
One or two schools attended	2,937	75	426	57	1,317	70	1,155	88
Three schools attended	6,304	75	954	60	2,873	70	2,381	88
Four schools attended	5,231	75	797	59	2,431	71	1,921	88
Five schools attended	3,399	75	495	57	1,535	70	1,311	87
Six schools attended	2,020	76	302	61	923	72	748	87
Seven schools attended	1,218	75	188	58	593	73	417	87
Eight or more schools attended	1,856	72	319	57	868	70	600	86
Use a hand-held calculator at home	11,708	78	1,292	60	4,577	72	5,650	88
Do not use a hand-held calculator at home	11,122	72	2,170	58	5,887	70	2,851	87
Use a hand-held calculator for homework	12,889	79	1,200	61	4,791	72	6,698	88
Do not use a hand-held calculator for homework	9,901	70	2,220	58	5,665	70	1,819	85
Use a hand-held calculator in school	11,846	80	1,019	61	4,280	72	6,366	88
Do not use a hand-held calculator in school	10,982	70	2,430	58	6,177	70	2,157	85
Mathematics course semestered	13,688	76	1,687	59	6,463	70	5,293	87
Mathematics course not semestered	9,036	74	1,735	58	3,960	70	3,189	88

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals, and Percent (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
No time spent on mathematics assignments	1,672	67	380	50	760	65	472	87
Less than 30 minutes spent on mathematics assignments	4,252	83	179	58	1,151	71	2,865	89
30 minutes or more/day spent on mathematics assignments	4,338	81	113	56	886	68	3,289	86
Do not have a part-time job	10,451	74	1,658	58	4,682	70	3,931	88
Have a part-time job on weekends only	4,229	75	571	58	1,864	70	1,723	87
Have a part-time job on weekdays only	1,119	74	182	56	484	68	432	88
Have a part-time job on both weekends and weekdays	7,090	76	1,046	61	3,482	72	2,451	88
Spend less than 5 hours on part-time job	1,136	75	157	54	474	69	487	88
Spend 5 - 10 hours on part-time job	3,518	76	476	57	1,538	70	1,434	88
Spend 10 - 20 hours on part-time job	5,232	76	733	61	2,499	72	1,936	88
Spend more than 20 hours on part-time job	2,444	73	427	62	1,263	71	704	86
Father's Education:								
Elementary school	2,639	74	491	61	1,254	71	842	88
Junior secondary school	4,377	74	777	59	2,150	71	1,386	88
Senior secondary school	4,495	73	728	57	2,114	69	1,577	87
Trade or vocational training	2,258	78	264	63	1,013	73	945	89
Technical training or some university	2,215	78	235	58	927	72	1,030	87
Completed university	2,525	81	181	59	867	73	1,442	89
Mother's Education:								
Elementary school	1,887	74	335	59	845	70	661	88
Junior secondary school	4,558	74	868	60	2,212	71	1,406	88
Senior secondary school	7,342	74	1,127	58	3,485	70	2,626	88
Trade or vocational training	1,767	78	195	63	786	72	757	88
Technical training or some university	2,256	79	214	60	902	72	1,111	88
Completed university	1,560	80	124	61	575	72	834	88

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals, and Percent (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Plans After Leaving Secondary School:								
Look for a job	4,447	67	1,201	58	2,526	68	621	84
Business, vocational, art or trade training	2,567	68	539	57	1,546	68	429	82
Technical institute	1,470	80	100	68	511	73	842	86
Community college: university transfer	2,350	80	135	60	960	73	1,247	88
Community college: career program	1,845	71	339	58	1,010	69	460	85
University	4,896	85	115	60	1,257	76	3,478	90
Other plans	2,111	70	482	59	1,111	69	446	96
Undecided	3,110	74	526	60	1,548	71	585	87
Born in Canada	12,198	76	1,793	60	5,637	71	4,597	88
Not born in Canada	1,779	78	187	57	680	70	879	88
Two years or less in Canada	331	81	20	63	96	72	204	87
3 - 4 years in Canada	221	78	22	52	73	70	122	88
5 years or more in Canada	1,195	77	141	57	489	70	549	88
English spoken before starting Grade 1	11,395	76	1,681	59	5,323	71	4,226	89
Other language spoken before starting Grade 1	2,384	76	364	58	1,122	70	1,302	87
English usually spoken in the home	12,909	76	1,898	59	5,990	71	4,829	88
Other language usually spoken in the home	1,569	76	196	57	577	69	768	87
Non-Canadian, non-English	658	78	59	54	197	68	390	88
Canadian, non-English	577	75	86	61	233	69	249	87
1st generation Canadian	193	73	31	57	89	70	69	84
Non-Canadian, English	719	77	88	60	336	72	286	89
Canadian, English	9,956	76	1,457	60	4,636	72	3,725	89

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals, and Percent (continued)

Reporting Category	Total N	Total Mean % Correct	Math 10 N	Math 10 Mean % Correct	Math 11 N	Math 11 Mean % Correct	Math 12 N	Math 12 Mean % Correct
Do not usually watch television	1,289	78	166	62	567	72	538	89
Watch T.V. less than 1 hour/day	1,615	81	163	65	609	75	818	90
Watch T.V. about 1 hour/day	2,572	80	310	62	1,105	75	1,123	90
Watch T.V. about 2 hours/day	3,637	76	499	58	1,624	71	1,461	88
Watch T.V. about 3 hours/day	2,774	74	453	60	1,363	69	925	87
Watch T.V. about 4 hours/day	1,688	71	302	56	868	68	478	86
Watch T.V. 5 hours or more/day	899	67	192	62	440	65	251	84
Usually read a newspaper every day	5,638	78	678	62	2,514	72	2,372	89
Read a newspaper 3 - 4 times/week	3,514	76	494	57	1,543	71	1,424	88
Read a newspaper once/week	3,198	74	545	59	1,496	70	1,113	88
Read a newspaper once/month	502	75	78	60	235	71	180	88
Hardly ever read a newspaper	1,635	70	296	64	782	66	518	86
Hardly ever read a magazine	2,060	70	392	56	982	67	630	86
Read a magazine once/month	2,665	76	387	61	1,226	70	1,017	89
Read a magazine 1 - 2 times/week	6,749	77	885	59	3,040	72	2,734	88
Read a magazine 3 - 4 times/week	2,998	77	423	61	1,313	72	1,223	89
Read 0 - 2 books/year	2,518	71	496	57	1,238	68	746	86
Read 3 - 5 books/year	3,112	74	430	58	1,452	69	1,179	87
Read 6 - 8 books/year	2,251	77	286	61	974	72	958	88
Read 1 book/month	2,197	77	300	62	966	71	911	89
Read 2 books/month	2,323	78	272	59	1,037	73	981	90
Read 1 book/week	1,224	78	182	61	533	74	490	89
Read more than 1 book/week	900	78	138	61	398	73	351	91

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals, and Percent (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Father's Occupation:								
Clerical	240	76	27	61	104	70	104	87
Deceased	498	73	86	59	238	68	163	90
Farmer	435	77	68	60	199	71	159	91
Managerial	3,246	76	411	58	1,473	72	1,318	88
Mining, logging, fishing, farmwork	1,124	72	197	57	598	69	313	87
Professional	1,306	82	92	64	440	73	761	90
Retired	532	75	96	63	258	70	175	89
Sales	687	79	95	61	267	74	317	90
Semi-skilled	881	74	141	50	420	71	310	88
Service	543	78	78	57	228	73	236	90
Skilled	2,461	76	391	61	1,159	72	869	88
Technical	392	77	46	63	158	70	179	86
Transport, communications	412	75	61	58	205	71	141	88
Unskilled	436	76	64	62	193	69	173	90
Other	1,124	71	202	54	548	69	351	86

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals, and Percent (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Mother's Occupation:								
Clerical	1,994	76	263	60	949	72	749	88
Deceased	158	77	26	63	76	73	53	92
Farmer	116	69	17	53	55	59	41	90
Homemaker	6,529	76	962	59	2,867	71	2,616	88
Managerial	647	76	85	60	316	72	236	89
Professional	896	79	67	60	374	72	445	89
Retired	188	70	43	56	87	66	57	86
Sales	549	77	76	60	268	71	201	92
Semi-skilled	334	76	53	55	120	70	157	89
Service, recreation	489	76	96	60	228	73	156	89
Skilled	203	73	30	57	100	68	73	87
Technical	276	77	29	64	121	69	126	87
Transport, communications	97	75	9	64	47	67	39	89
Unskilled	422	78	55	66	201	72	158	90
Other	1,479	71	252	56	722	68	468	86

Grade/Year 12 - Test Results by Item

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals, and Percent

Item 3.1.1 (24):

Tennis balls are on sale at 4 sport shops. You would pay the lowest price per ball if you bought at the store which offers:

	Total Grade 12	Math 10	Math 11	Math 12
A) 8 tennis balls for $7.25	13			
B) 1 dozen balls for $11.00	15			
C) tennis balls for $0.95 each	4			
D) 3 tennis balls for $2.70	65	45	60	78
E) I don't know	2			
Missing	*			
Multiple	*			

Item 3.1.2 (25):

A used car can be bought for $2850 cash, or on credit with a down payment of $400 and $80 per month for three years. How much more would a person pay by buying on credit than by buying the car for cash?

	Total Grade 12	Math 10	Math 11	Math 12
A) $3280	14			
B) $2850	3			
C) $ 430	70	57	66	83
D) He wouldn't pay any more	6			
E) I don't know	5			
Missing	1			
Multiple	1			

Item 3.1.3 (26):

In four months, Susan spent the following amounts on records:

1st month — $17.95
2nd month — $22.40
3rd month — $ 8.25
4th month — $15.80

What was the average amount she spent on records per month?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) $10.10	3				6
B) $64.40	4				21
C) $32.20	2				5
D) $16.10	89	78	88	96	63
E) I don't know	1				5
Missing	*				1
Multiple	*				*

* indicates <0.5%

Grade/Year 12 - Test Results by Item

DOMAIN 3: APPLICATIONS

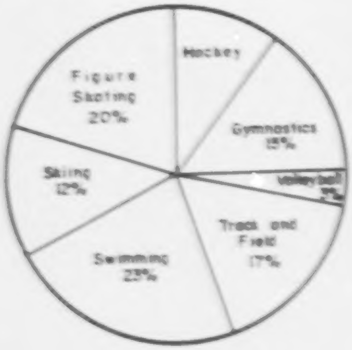
Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals, and Percent

Item 3.1.4 (27):

Black and white television sets are on sale at two stores. One store offers a 10% discount while the other offers a 15% discount. If a television set is regularly priced at $100, what is the difference in the sale price at the two stores?

	Total Grade 12	Math 10	Math 11	Math 12
A) $15	4			
B) $ 5	86	74	83	94
C) $10	3			
D) $25	3			
E) I don't know	3			
Missing	1			
Multiple	*			

Item 3.1.5 (58):



The 1200 students in a secondary school were asked to name their favourite Olympic sport. The results of the poll are shown in the circle graph above.

What percent chose hockey?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 100%	2				4
B) 8%	5				12
C) 10%	87	75	85	95	66
D) 12%	4				10
E) I don't know	1				6
Missing	1				1
Multiple	*				1

* indicates <0.5%

Grade/Year 12 - Test Results by Item

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals, and Percent

Item 3.1.6 (59):

How many students chose skiing?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 144 students	79	63	75	91	57
B) 12 students	12				23
C) 1200 students	2				6
D) 1188 students	1				3
E) I don't know	4				9
Missing	1				1
Multiple	*				1

Item 3.1.7 (60):

How many more students chose figure skating than gymnastics?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 420 students	4				7
B) 35 students	11				19
C) 60 students	66	41	58	86	38
D) 5 students	11				24
E) I don't know	7				10
Missing	1				1
Multiple	*				*

Item 3.1.8 (71):

A salesman receives 20% of the retail value of his sales as a commission. What must his total sales be if he is to earn a commission of $60?

	Total Grade 12	Math 10	Math 11	Math 12
A) $1200	20			
B) $ 80	4			
C) $ 300	62	40	55	82
D) $ 240	6			
E) I don't know	5			
Missing	2			
Multiple	*			

* indicates <0.5%

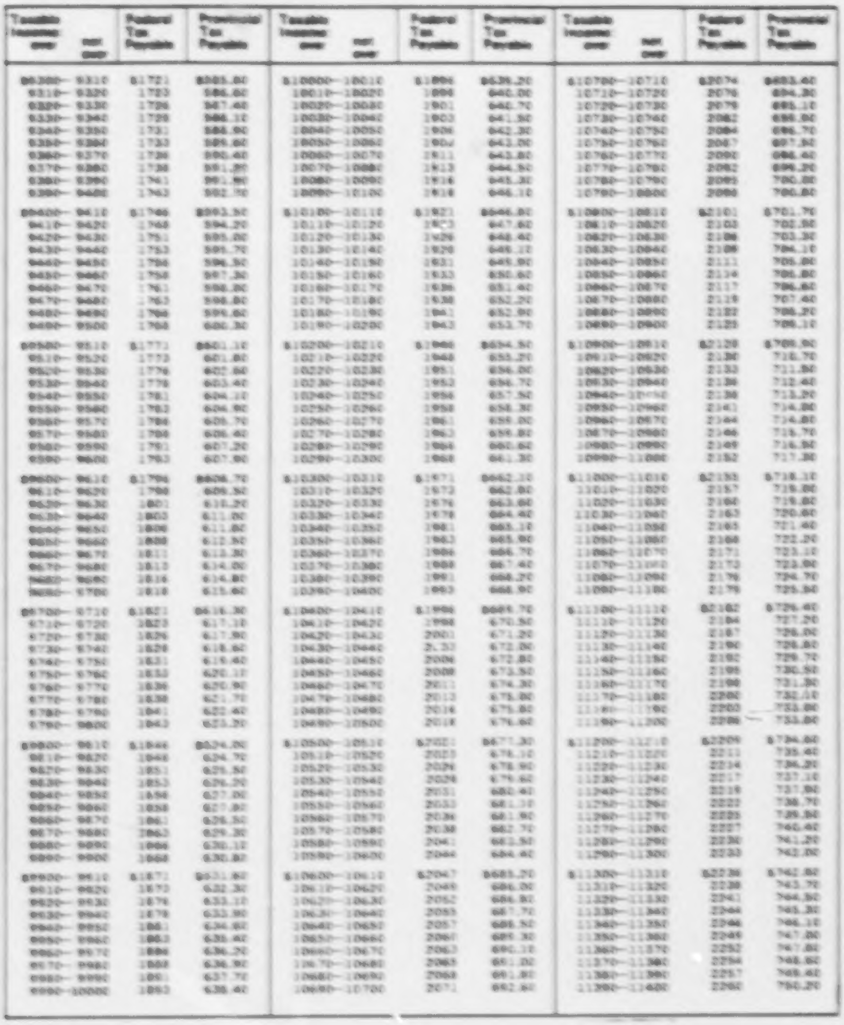
Grade/Year 12 - Test Results by Item

DOMAIN 3: APPLICATIONS

Objective 3.1: Solve Problems Involving Operations with Whole Numbers, Fractions, Decimals and Percent (continued)

Item 3.1.9 (72):

Using the table shown below, find the total tax payable (federal and provincial) on a taxable income of $10 368.82.



	Total Grade 12	Math 10	Math 11	Math 12
A) $2648.80	69	49	64	84
B) $2646.10	4			
C) $2652.70	6			
D) $1983.00	13			
E) I don't know	6			
Missing	3			
Multiple	*			

* indicates <0.5%

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.2: Solve Problems Involving Geometry and Measurement

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Total	23,136	55	3,506	33	10,607	46	8,576	76
19 years or older	1,389	44	318	29	708	40	307	70
18 years	7,127	53	1,194	33	3,438	45	2,334	75
17 years	13,993	57	1,919	34	6,252	48	5,647	76
16 years or younger	477	65	46	34	157	54	256	79
Male	11,069	61	1,211	39	4,790	50	4,866	77
Female	11,831	50	2,251	30	5,727	43	3,648	74
One or two schools attended	2,937	55	426	32	1,317	45	1,155	75
Three schools attended	6,304	55	954	32	2,873	46	2,381	76
Four schools attended	5,231	56	797	35	2,431	46	1,921	76
Five schools attended	3,399	56	495	32	1,535	47	1,311	75
Six schools attended	2,020	56	302	35	923	48	748	76
Seven schools attended	1,218	55	188	32	593	49	417	76
Eight or more schools attended	1,856	53	319	33	868	46	600	75
Use a hand-held calculator at home	11,708	60	1,292	34	4,577	48	5,650	77
Do not use a hand-held calculator at home	11,122	50	2,170	33	5,887	45	2,851	74
Use a hand-held calculator for homework	12,889	62	1,200	34	4,791	48	6,698	77
Do not use a hand-held calculator for homework	9,901	47	2,220	33	5,665	45	1,819	72
Use a hand-held calculator in school	11,846	63	1,019	35	4,280	49	6,366	77
Do not use a hand-held calculator in school	10,982	47	2,430	33	6,177	45	2,157	72
Mathematics course semestered	13,688	56	1,687	34	5,463	46	5,293	75
Mathematics course not semestered	9,036	54	1,735	33	3,960	46	3,189	77

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.2: Solve Problems Involving Geometry and Measurement (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
No time spent on mathematics assignments	1,672	49	380	29	760	43	472	77
Less than 30 minutes spent on mathematics assignments	4,252	68	179	36	1,151	49	2,865	78
30 minutes or more/day spent on mathematics assignments	4,338	67	113	36	886	48	3,289	74
Do not have a part-time job	10,451	55	1,658	33	4,682	46	3,931	76
Have a part-time job on weekends only	4,229	56	571	33	1,864	46	1,723	75
Have a part-time job on weekdays only	1,119	56	182	32	484	46	432	78
Have a part-time job on both weekends and weekdays	7,090	55	1,046	34	3,482	47	2,451	75
Spend less than 5 hours on part-time job	1,136	58	157	31	474	47	487	78
Spend 5 - 10 hours on part-time job	3,518	56	476	33	1,538	46	1,434	75
Spend 10 - 20 hours on part-time job	5,232	55	733	34	2,499	47	1,936	75
Spend more than 20 hours on part-time job	2,444	52	427	35	1,263	46	704	75
Father's Education:								
Elementary school	2,639	53	491	34	1,254	46	842	76
Junior secondary school	4,377	53	777	33	2,150	46	1,386	75
Senior secondary school	4,495	53	728	33	2,114	45	1,577	75
Trade or vocational training	2,258	59	264	39	1,013	48	945	77
Technical training or some university	2,215	60	235	34	927	50	1,030	76
Completed university	2,525	64	181	36	867	50	1,442	77
Mother's Education:								
Elementary school	1,887	54	335	32	845	46	661	77
Junior secondary school	4,558	52	868	34	2,212	46	1,406	76
Senior secondary school	7,342	55	1,127	34	3,485	46	2,626	76
Trade or vocational training	1,767	58	195	35	786	48	757	76
Technical training or some university	2,256	61	214	33	902	49	1,111	77
Completed university	1,560	63	124	38	575	51	834	76

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.2: Solve Problems Involving Geometry and Measurement (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Plans After Leaving Secondary School:								
Look for a job	4,447	43	1,201	32	2,526	43	621	69
Business, vocational, art or trade training	2,567	47	539	34	1,546	46	429	70
Technical institute	1,470	64	100	43	511	52	842	75
Community college: university transfer	2,350	62	135	35	960	48	1,247	75
Community college: career program	1,845	49	339	32	1,010	44	460	71
University	4,896	72	115	40	1,257	53	3,478	80
Other plans	2,111	48	482	34	1,111	45	446	73
Undecided	3,110	53	526	33	1,548	46	985	75
Born in Canada	12,198	56	1,793	34	5,637	47	4,597	76
Not born in Canada	1,779	62	187	35	680	49	879	79
Two years or less in Canada	331	70	20	34	96	55	204	81
3 - 4 years in Canada	221	65	22	38	73	47	122	82
5 years or more in Canada	1,195	60	141	35	489	48	549	77
English spoken before starting Grade 1	11,395	56	1,681	34	5,323	47	4,226	76
Other language spoken before starting Grade 1	2,384	59	364	33	1,122	46	1,302	78
English usually spoken in the home	12,909	56	1,898	34	5,990	47	4,829	76
Other language usually spoken in the home	1,569	60	196	34	577	46	768	78
Non-Canadian, non-English	658	66	59	38	197	49	390	79
Canadian, non-English	577	57	86	34	233	44	249	78
1st generation Canadian	193	53	31	30	89	46	69	71
Non-Canadian, English	719	59	88	35	336	50	286	79
Canadian, English	9,956	56	1,457	34	4,636	47	3,725	77

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.2: Solve Problems Involving Geometry and Measurement (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Do not usually watch television	1,289	61	166	38	567	51	538	80
Watch T.V. less than 1 hour/day	1,615	64	163	38	609	51	818	79
Watch T.V. about 1 hour/day	2,572	60	310	34	1,105	50	1,123	78
Watch T.V. about 2 hours/day	3,637	57	499	34	1,624	46	1,461	76
Watch T.V. about 3 hours/day	2,774	53	453	34	1,363	45	925	75
Watch T.V. about 4 hours/day	1,685	49	302	32	868	42	478	73
Watch T.V. 5 hours or more/day	899	47	192	28	440	41	251	73
Usually read a newspaper every day	5,638	58	678	35	2,514	47	2,372	77
Read a newspaper 3 - 4 times/ week	3,514	57	494	33	1,543	48	1,424	76
Read a newspaper once/week	3,198	55	545	34	1,496	46	1,113	77
Read a newspaper once/month	502	57	78	35	235	49	180	77
Hardly ever read a newspaper	1,635	51	296	32	782	43	518	75
Hardly ever read a magazine	2,060	50	392	33	982	42	630	74
Read a magazine once/month	2,665	56	387	34	1,226	45	1,017	77
Read a magazine 1 - 2 times/ week	6,749	57	885	34	3,040	48	2,734	76
Read a magazine 3 - 4 times/ week	2,996	59	423	35	1,313	49	1,223	78
Read 0 - 2 books/year	2,518	51	486	34	1,235	44	746	74
Read 3 - 5 books/year	3,112	55	430	32	1,452	46	1,179	75
Read 6 - 8 books/year	2,251	59	286	35	974	48	958	77
Read 1 book/month	2,197	58	300	36	966	47	911	77
Read 2 books/month	2,323	59	272	34	1,037	47	981	78
Read 1 book/week	1,224	58	182	34	533	48	490	78
Read more than 1 book/week	900	59	138	33	398	50	351	79

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.2: Solve Problems Involving Geometry and Measurement (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Father's Occupation:								
Clerical	240	59	27	34	104	47	104	76
Deceased	498	54	86	32	238	44	163	81
Farmer	435	56	68	35	199	49	159	79
Managerial	3,246	57	411	32	1,473	47	1,318	76
Mining, logging, fishing, farmwork	1,124	51	197	33	598	45	313	74
Professional	1,306	66	92	41	440	51	761	78
Retired	532	56	96	34	258	49	175	78
Sales	687	59	95	36	267	48	317	76
Semi-skilled	881	53	141	31	420	45	310	73
Service	543	59	76	32	228	47	236	79
Skilled	2,461	56	391	36	1,159	48	869	77
Technical	392	59	46	40	158	47	179	75
Transport, communications	412	55	61	33	205	46	141	78
Unskilled	436	56	64	32	193	44	173	78
Other	1,124	52	202	32	548	45	351	75

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.2: Solve Problems Involving Geometry and Measurement (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Mother's Occupation:								
Clerical	1,994	56	263	36	949	47	749	76
Deceased	158	57	26	39	76	49	53	79
Farmer	116	55	17	36	55	44	41	79
Homemaker	6,529	57	962	34	2,867	47	2,616	77
Managerial	647	56	85	33	316	48	236	76
Professional	896	63	67	38	374	50	445	78
Retired	188	48	43	27	87	42	57	75
Sales	549	57	76	29	268	47	201	81
Semi-skilled	334	58	53	31	120	44	157	80
Service, recreation	489	53	96	32	228	47	156	75
Skilled	203	57	30	33	100	47	73	79
Technical	278	57	29	37	121	43	126	76
Transport, communications	97	57	9	33	47	48	39	75
Unskilled	422	57	55	38	201	49	158	74
Other	1,479	51	252	32	722	44	468	75

Grade/Year 12 - Test Results by Item

DOMAIN 3: APPLICATIONS

Objective 3.2: Solve Problems Involving Geometry and Measurement

Item 3.2.1 (33):

The perimeter of a square is 12 centimetres. Find the area in square centimetres.

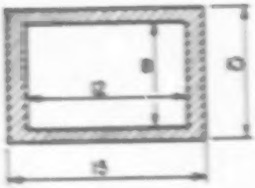
	Total Grade 12	Math 10	Math 11	Math 12
A) 48	9			
B) 9	35	11	24	61
C) 12	3			
D) 144	43			
E) I don't know	9			
Missing	1			
Multiple	*			

Item 3.2.2 (36):

A map of B.C. is to be drawn so that 1 millimetre represents 5 kilometres. If the actual distance between Vernon and Penticton is 125 kilometres, how many millimetres apart should these two points be on the map?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 125	2				5
B) 625	7				12
C) 130	2				5
D) 25	81	61	78	94	66
E) I don't know	7				11
Missing	*				*
Multiple	*				1

Item 3.2.3 (37):



What is the area of the shaded portion of this figure?

	Total Grade 12	Math 10	Math 11	Math 12	Grade 8
A) 54	54	27	44	79	27
B) 96	16				28
C) 120	6				11
D) 90	8				11
E) I don't know	15				21
Missing	1				1
Multiple	*				1

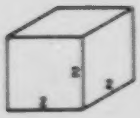
* indicates <0.5%

Grade/Year 12 - Test Results by Item

DOMAIN 3: APPLICATIONS

Objective 3.2: Solve Problems Involving Geometry and Measurement (continued)

Item 3.2.4 (49):

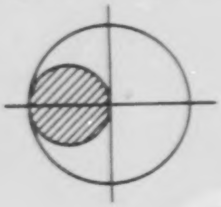


What is the total surface area of this two centimetre cube?

	Total Grade 12	Math 10	Math 11	Math 12
A) 24 cm^2	37	19	26	58
B) 16 cm^2	12			
C) 32 cm^2	8			
D) 8 cm^2	33			
E) I don't know	10			
Missing	1			
Multiple	*			

Item 3.2.5 (53):

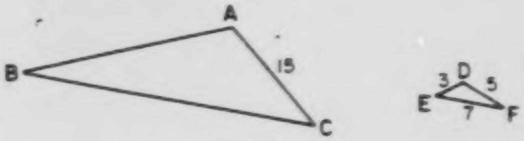
What fractional part of the large circle is shaded?



	Total Grade 12	Math 10	Math 11	Math 12
A) $\frac{1}{5}$	10			
B) $\frac{1}{4}$	72	61	70	81
C) $\frac{1}{3}$	8			
D) $\frac{1}{8}$	4			
E) I don't know	5			
Missing	1			
Multiple	*			

Item 3.2.6 (65):

Triangle ABC is similar to triangle DEF. Find the length of segment BC.



	Total Grade 12	Math 10	Math 11	Math 12
A) 21	63	44	62	74
B) 15	4			
C) 35	19			
D) $\frac{45}{7}$	3			
E) I don't know	9			
Missing	1			
Multiple	*			

* indicates <0.5%

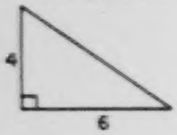
Grade/Year 12 - Test Results by Item

DOMAIN 3: APPLICATIONS

Objective 3.2: Solve Problems Involving Geometry and Measurement (continued)

Item 3.2.7 (66):

If two sides of a right triangle are 6 cm and 4 cm long, find the length of the hypotenuse.



		Total Grade 12	Math 10	Math 11	Math 12
A)	$\sqrt{20}$	6			
B)	10	23			
C)	52	6			
D)	$\sqrt{52}$	43	10	21	84
E)	I don't know	21			
	Missing	1			
	Multiple	*			

* indicates <0.5%

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.3: Solve Algebraic Problems

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Total	23,136	58	3,506	35	10,607	49	8,576	79
19 years or older	1,389	47	318	33	708	44	307	73
18 years	7,127	55	1,194	33	3,438	47	2,334	78
17 years	13,993	60	1,919	37	6,252	50	5,647	80
16 years or younger	477	69	46	28	157	56	256	86
Male	11,069	64	1,211	43	4,790	54	4,866	81
Female	11,831	51	2,251	31	5,727	44	3,648	77
One or two schools attended	2,937	58	426	36	1,317	48	1,155	79
Three schools attended	6,304	58	954	35	2,873	48	2,381	80
Four schools attended	5,231	58	797	35	2,431	49	1,921	79
Five schools attended	3,399	58	495	31	1,535	49	1,311	78
Six schools attended	2,020	60	302	39	923	52	748	80
Seven schools attended	1,218	58	188	34	593	52	417	79
Eight or more schools attended	1,856	56	319	36	868	49	600	79
Use a hand-held calculator at home	11,708	64	1,292	37	4,577	51	5,650	81
Do not use a hand-held calculator at home	11,122	52	2,170	34	5,887	47	2,851	76
Use a hand-held calculator for homework	12,889	65	1,200	37	4,791	51	6,698	80
Do not use a hand-held calculator for homework	9,901	49	2,220	34	5,665	47	1,819	75
Use a hand-held calculator in school	11,846	66	1,019	39	4,280	52	6,366	81
Do not use a hand-held calculator in school	10,982	49	2,430	34	6,177	46	2,157	75
Mathematics course semestered	13,688	59	1,687	36	6,463	49	5,293	78
Mathematics course not semestered	9,036	57	1,735	34	3,960	49	3,189	80

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.3: Solve Algebraic Problems (continued)

	Total		Math 10		Math 11		Math 12	
Reporting Category	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
No time spent on mathematics assignments	1,672	51	380	31	760	44	472	79
Less than 30 minutes spent on mathematics assignments	4,252	71	179	37	1,151	52	2,865	81
30 minutes or more/day spent on mathematics assignments	4,338	70	113	40	886	51	3,289	77
Do not have a part-time job	10,451	58	1,658	35	4,682	48	3,931	80
Have a part-time job on weekends only	4,229	60	571	36	1,864	50	1,723	79
Have a part-time job on weekdays only	1,119	59	182	34	484	47	432	82
Have a part-time job on both weekends and weekdays	7,090	58	1,046	35	3,482	50	2,451	79
Spend less than 5 hours on part-time job	1,136	60	157	33	474	48	487	80
Spend 5 - 10 hours on part-time job	3,518	60	476	35	1,538	49	1,434	80
Spend 10 - 20 hours on part-time job	5,232	58	733	36	2,499	50	1,936	78
Spend more than 20 hours on part-time job	2,444	55	427	36	1,263	49	704	77
Father's Education:								
Elementary school	2,639	56	491	36	1,254	48	842	81
Junior secondary school	4,377	55	777	36	2,150	48	1,386	79
Senior secondary school	4,495	57	728	34	2,114	50	1,577	79
Trade or vocational training	2,258	62	264	42	1,013	52	945	80
Technical training or some university	2,215	62	235	37	927	51	1,030	77
Completed university	2,525	68	181	33	867	52	1,442	82
Mother's Education:								
Elementary school	1,887	58	335	37	845	49	661	80
Junior secondary school	4,558	55	868	34	2,212	48	1,406	78
Senior secondary school	7,342	58	1,127	35	3,485	50	2,626	79
Trade or vocational training	1,767	60	195	36	786	49	757	78
Technical training or some university	2,256	63	214	34	902	50	1,111	81
Completed university	1,560	67	124	40	575	52	834	82

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.3: Solve Algebraic Problems (continued)

Reporting Category	Total N	Total Mean % Correct	Math 10 N	Math 10 Mean % Correct	Math 11 N	Math 11 Mean % Correct	Math 12 N	Math 12 Mean % Correct
Plans After Leaving Secondary School:								
Look for a job	4,447	46	1,201	34	2,526	46	621	73
Business, vocational, art or trade training	2,567	51	539	36	1,546	50	429	74
Technical institute	1,470	68	100	45	511	55	842	78
Community college: university transfer	2,350	65	135	35	960	50	1,247	79
Community college: career program	1,845	52	339	34	1,010	48	460	75
University	4,896	75	115	41	1,257	56	3,478	84
Other plans	2,111	50	482	36	1,111	47	446	74
Undecided	3,110	54	526	34	1,548	47	985	76
Born in Canada	12,198	59	1,793	36	5,637	50	4,597	80
Not born in Canada	1,779	63	187	32	680	50	879	80
Two years or less in Canada	331	69	20	28	96	53	204	80
3 - 4 years in Canada	221	60	22	30	73	42	122	78
5 years or more in Canada	1,195	62	141	34	489	52	549	80
English spoken before starting Grade 1	11,395	59	1,681	35	5,323	50	4,226	80
Other language spoken before starting Grade 1	2,384	61	364	38	1,122	47	1,302	80
English usually spoken in the home	12,909	59	1,6[illegible]8	36	5,990	50	4,829	80
Other language usually spoken in the home	1,569	61	196	35	577	46	768	78
Non-Canadian, non-English	658	65	59	36	197	46	390	80
Canadian, non-English	577	58	86	36	233	47	249	78
1st generation Canadian	193	56	31	40	89	48	69	74
Non-Canadian, English	719	60	88	30	336	52	286	80
Canadian, English	9,956	59	1,457	36	4,636	50	3,725	80

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.3: Solve Algebraic Problems (continued)

Reporting Category	Total N	Total Mean % Correct	Math 10 N	Math 10 Mean % Correct	Math 11 N	Math 11 Mean % Correct	Math 12 N	Math 12 Mean % Correct
Do not usually watch television	1,289	61	166	38	567	50	538	81
Watch T.V. less than 1 hour/day	1,615	67	163	40	605	55	818	82
Watch T.V. about 1 hour/day	2,572	63	310	36	1,105	52	1,123	82
Watch T.V. about 2 hours/day	3,637	59	499	36	1,624	49	1,461	79
Watch T.V. about 3 hours/day	2,774	56	453	36	1,363	49	925	77
Watch T.V. about 4 hours/day	1,685	53	302	33	868	47	478	78
Watch T.V. 5 hours or more/day	899	50	192	32	440	43	251	75
Usually read a newspaper every day	5,638	62	678	37	2,514	50	2,372	81
Read a newspaper 3 - 4 times/week	3,514	60	494	36	1,543	50	1,424	79
Read a newspaper once/week	3,198	58	545	35	1,496	50	1,113	80
Read a newspaper once/month	502	56	78	36	235	48	180	74
Hardly ever read a newspaper	1,635	52	296	33	782	43	518	78
Hardly ever read a magazine	2,060	52	392	33	982	46	630	76
Read a magazine once/month	2,665	58	387	35	1,226	48	1,017	79
Read a magazine 1 - 2 times/week	6,749	60	885	36	3,040	50	2,734	80
Read a magazine 3 - 4 times/week	2,996	62	423	36	1,313	52	1,223	82
Read 0 - 2 books/year	2,518	53	486	37	1,235	46	746	77
Read 3 - 5 books/year	3,112	57	430	34	1,452	48	1,179	77
Read 6 - 8 books/year	2,251	62	286	38	974	51	958	81
Read 1 book/month	2,197	60	300	75	966	50	911	79
Read 2 books/month	2,323	62	272	35	1,037	50	981	82
Read 1 book/week	1,224	62	182	37	533	54	490	82
Read more than 1 book/week	900	61	138	34	398	51	351	84

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.3: Solve Algebraic Problems (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Father's Occupation:								
Clerical	240	64	27	43	104	52	104	83
Deceased	498	55	86	30	238	46	163	84
Farmer	435	60	68	31	199	56	159	79
Managerial	3,246	59	411	35	1,473	49	1,318	79
Mining, logging, fishing, farmwork	1,124	53	197	36	598	46	313	78
Professional	1,306	60	92	44	440	54	761	82
Retired	532	58	96	41	258	49	175	79
Sales	687	63	95	37	267	52	317	80
Semi-skilled	881	57	141	35	420	46	310	82
Service	543	63	76	32	228	53	236	82
Skilled	2,461	59	391	36	1,159	50	869	80
Technical	392	60	46	39	158	51	179	74
Transport, communications	412	56	61	29	205	49	141	80
Unskilled	436	59	64	42	193	44	173	82
Other	1,124	54	202	31	548	50	351	76

Grade/Year 12 - Objective Means by Reporting Categories

DOMAIN 3: APPLICATIONS

Objective 3.3: Solve Algebraic Problems (continued)

Reporting Category	Total		Math 10		Math 11		Math 12	
	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct	N	Mean % Correct
Mother's Occupation:								
Clerical	1,994	58	263	34	949	49	749	80
Deceased	158	60	26	48	76	50	53	83
Farmer	116	61	17	35	55	56	41	80
Homemaker	6,529	60	962	36	2,867	51	2,616	80
Managerial	647	57	85	36	316	47	236	79
Professional	896	66	67	40	374	52	445	82
Retired	188	51	43	28	87	46	57	76
Sales	549	59	76	32	268	50	201	83
Semi-skilled	334	62	53	38	120	45	157	83
Service, recreation	489	58	96	38	228	51	156	80
Skilled	203	60	30	35	100	50	73	85
Technical	278	59	29	36	121	43	126	81
Transport, communications	97	60	9	28	47	57	39	74
Unskilled	422	57	55	37	201	45	158	79
Other	1,479	53	252	34	722	47	468	75

Grade/Year 12 - Test Results by Item

DOMAIN 3: APPLICATIONS

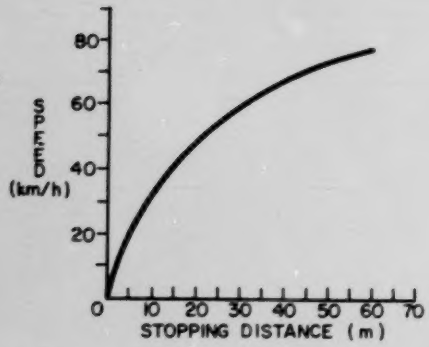
Objective 3.3: Solve Algebraic Problems

Item 3.3.1 (69):

Find the *principal*, if the interest received after two years at an annual rate of 6% is $80.

		Total Grade 12	Math 10	Math 11	Math 12
A)	$2000	9			
B)	$5000	7			
C)	$ 500	48	26	36	73
D)	$ 720	17			
E)	I don't know	16			
	Missing	2			
	Multiple	*			

Item 3.3.2 (70):



This graph represents the relationship between the speed of a car in kilometres per hour (km/h) and the stopping distance in metres (m) after first applying the brakes. If the skid marks were 45 metres long, about how fast was the car travelling when the brakes were first applied?

		Total Grade 12	Math 10	Math 11	Math 12
A)	40 km/h	6			
B)	56 km/h	9			
C)	72 km/h	67	44	61	85
D)	88 km/h	4			
E)	I don't know	13			
	Missing	2			
	Multiple	*			

* indicates <0.5%

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.1 *Years of post-secondary education as of June, 1977:*

Grade	N	One	Two	Three	Four	Five	Six or More
Total (Elem.)	1997	0.3%	4.8	22.2	35.1	28.0	9.7
Grade 1	495	0.4%	7.9	33.9	40.2	15.4	2.2
Grade 3	495	0.2%	7.1	26.1	41.0	20.0	5.7
Grade 5	522	0.4%	2.9	18.0	34.3	34.5	10.0
Grade 7	485	0.0%	1.2	10.7	24.7	42.1	21.2
Total (Sec.)	747	0.3%	0.4	1.5	7.2	56.4	34.3
Grade 8	383	0.0%	0.8	2.1	9.7	57.2	30.3
Grade 10	275	0.4%	0.0	1.1	5.8	54.2	38.5
Grade 12	89	1.1%	0.0	0.0	1.1	59.6	38.2

Q.2 *Years of teaching experience as of June, 1977:*

Grade	N	1 or less	2 - 5	6 - 9	10 - 13	1 or More
Total (Elem.)	2020	5.6%	28.6	22.4	16.1	27.3
Grade 1	507	4.1%	25.6	26.2	16.4	27.6
Grade 3	500	5.4%	33.6	22.8	14.0	24.2
Grade 5	524	7.1%	33.4	19.3	13.7	26.5
Grade 7	489	5.7%	21.3	21.5	20.4	31.1
Total (Sec.)	747	5.2%	22.1	20.2	18.6	33.9
Grade 8	383	7.6%	24.3	22.5	17.8	27.9
Grade 10	275	3.3%	23.3	17.8	18.2	37.5
Grade 12	89	1.1%	9.0	18.0	23.6	48.3

Q.3 *At which of the following levels have you taught?*

Grade	N	Primary	Intermediate	Junior Secondary	Senior Secondary
Total (Elem.)	2024	65.3%	73.7	17.7	8.2
Grade 1	507	99.8%	32.5	7.1	3.2
Grade 3	501	98.8%	65.1	10.2	3.8
Grade 5	524	35.7%	98.9	18.7	9.2
Grade 7	492	27.0%	98.0	35.4	16.7
Total (Sec.)	747	10.7%	30.0	96.9	62.8
Grade 8	383	11.7%	32.4	99.5	50.4
Grade 10	275	10.9%	29.1	96.0	68.0
Grade 12	89	5.6%	22.5	88.8	100.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART 1 - BACKGROUND AND GENERAL INFORMATION

Q.4 *In your undergraduate training, was/is mathematics one of your major subject areas?*

Grade	N	Yes
Total (Elem.)	2003	12.9%
Grade 1	501	11.0%
Grade 3	497	9.7%
Grade 5	519	12.7%
Grade 7	486	18.3%
Total (Sec.)	747	65.2%
Grade 8	383	51.7%
Grade 10	275	74.9%
Grade 12	89	93.3%

Q.5 *(If mathematics was not one of your major undergraduate subject areas) have you completed at least one course in mathematics content beyond secondary graduation?*

Grade	N	Yes
Total (Elem.)	1733	74.4%
Grade 1	441	72.3%
Grade 3	446	71.3%
Grade 5	449	74.4%
Grade 7	397	80.4%
Total (Sec.)	258	86.4%
Grade 8	185	84.9%
Grade 10	68	89.7%
Grade 12	5	100.0%

Q.6 *Have you completed at least one course in how to teach mathematics (mathematics methods course)?*

Grade	N	Yes, more than 10 years ago	Yes, in the last 10 years	No
Total (Elem.)	1992	35.0%	51.3	13.7
Grade 1	495	35.4%	54.5	10.1
Grade 3	498	34.9%	54.0	11.0
Grade 5	517	29.8%	54.0	16.2
Grade 7	482	40.2%	42.3	17.4
Total (Sec.)	736	37.0%	42.3	20.8
Grade 8	376	31.6%	40.4	27.9
Grade 10	272	39.7%	44.1	16.2
Grade 12	88	51.1%	44.3	4.5

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.7 *To which of the following associations do you currently belong?*

Grade	N	B.C. Assoc. of Mathematics Teachers	Nat. Council of Teachers of Mathematics	Local Math P.S.A.	Prov. Intermed. Teachers Association	B.C. Primary Teachers Association
Total (Elem.)	2024	2.8%	0.7	1.1	14.0	28.7
Grade 1	507	1.4%	0.0	0.4	1.0	62.5
Grade 3	501	4.4%	0.6	1.0	6.0	49.3
Grade 5	524	1.3%	0.8	1.1	26.5	2.7
Grade 7	492	4.3%	1.6	2.0	24.6	0.6
Total (Sec.)	747	27.7%	10.3	21.8		
Grade 8	383	23.0%	7.8	14.9	Not Asked	Not Asked
Grade 10	275	28.7%	11.3	28.0		
Grade 12	89	44.9%	18.0	32.6		

Q.8 *Have you attended a mathematics session at a conference in the last three years?*

Grade	N	Yes
Total (Elem.)	1998	57.8%
Grade 1	502	67.1%
Grade 3	496	60.1%
Grade 5	518	49.6%
Grade 7	482	54.0%
Total (Sec.)	743	60.8%
Grade 8	381	52.2%
Grade 10	273	65.6%
Grade 12	89	83.1%

Q.9 *Have you attended a workshop (other than at a conference) or in-service day in mathematics in the last three years?*

Grade	N	Yes
Total (Elem.)	2007	64.2%
Grade 1	506	70.8%
Grade 3	495	65.7%
Grade 5	520	58.5%
Grade 7	486	61.9%
Total (Sec.)	741	61.1%
Grade 8	381	55.6%
Grade 10	271	64.6%
Grade 12	89	74.2%

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.10 (*Elementary*) *Please mark each of the following statements according to how strongly you agree or disagree with each:*

a. MATHEMATICS WAS ONE OF MY FAVOURITE SUBJECTS AS A STUDENT IN COLLEGE OR UNIVERSITY

Grade	N	Strongly Agree (5)	(4)	(3)	(2)	Strongly Disagree (1)	MEAN	S.D.
Total (Elem.)	1919	13.5%	15.3	35.6	19.5	16.1	2.9	1.2
Grade 1	486	10.5%	12.6	39.5	22.6	14.8	2.8	1.2
Grade 3	476	12.2%	16.0	33.8	19.3	18.7	2.8	1.2
Grade 5	491	12.6%	15.9	33.4	19.6	18.5	2.8	1.3
Grade 7	466	18.9%	16.7	35.6	16.5	12.2	3.1	1.2

b. MATHEMATICS IS ONE OF MY FAVOURITE SUBJECTS TO TEACH

Grade	N	Strongly Agree (5)	(4)	(3)	(2)	Strongly Disagree (1)	MEAN	S.D.
Total (Elem.)	2014	35.1%	36.3	24.1	3.3	1.2	4.0	.9
Grade 1	506	18.2%	37.9	36.7	5.7	1.4	3.6	.9
Grade 3	498	30.3%	37.6	26.9	3.6	1.6	3.9	.9
Grade 5	521	41.8%	38.0	16.5	2.5	1.2	4.2	.9
Grade 7	489	52.4%	31.5	14.1	1.4	0.6	4.3	.8

c. MATHEMATICS IS ONE OF THE EASIEST SUBJECTS FOR ME TO TEACH

Grade	N	Strongly Agree (5)	(4)	(3)	(2)	Strongly Disagree (1)	MEAN	S.D.
Total (Elem.)	2009	23.4%	37.3	29.8	7.2	2.4	3.7	1.0
Grade 1	504	12.9%	31.7	43.5	9.1	2.8	3.4	.9
Grade 3	498	19.5%	36.9	32.7	8.0	2.8	3.6	1.0
Grade 5	518	29.5%	40.9	21.4	5.8	2.3	3.9	1.0
Grade 7	489	31.7%	39.5	21.5	5.7	1.6	3.9	1.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.10 (*Secondary*) *Please mark the scale below according to how easy or difficult you find teaching mathematics at each of the following grade levels.*

a. GRADE 8

Grade	N	No Experience at this level	Easy to Teach (5)	(4)	(3)	(2)	Difficult to Teach (1)	(Among those with experience) MEAN	S.D.
Total (Sec.)	707	6.4%	36.5	22.6	20.7	10.6	3.3	3.8	1.2
Grade 8	379	0.3%	39.8	26.4	21.6	8.7	3.2	3.9	1.1
Grade 10	246	11.8%	31.7	19.5	20.3	13.0	3.7	3.7	1.2
Grade 12	82	18.3%	35.4	14.6	17.1	12.2	2.4	3.8	1.2

b. GRADE 9

Grade	N	No Experience at this level	Easy to Teach (5)	(4)	(3)	(2)	Difficult to Teach (1)	(Among those with experience) MEAN	S.D.
Total (Sec.)	676	16.4%	34.3	22.8	17.5	7.7	1.3	4.0	1.1
Grade 8	344	22.1%	31.7	20.7	16.3	6.4	1.2	4.0	1.0
Grade 10	250	9.6%	36.8	24.0	19.6	8.4	1.6	4.0	1.1
Grade 12	82	13.4%	37.8	22.4	15.9	11.0	1.2	4.0	1.1

c. GRADE 10

Grade	N	No Experience at this level	Easy to Teach (5)	(4)	(3)	(2)	Difficult to Teach (1)	(Among those with experience) MEAN	S.D.
Total (Sec.)	686	17.2%	35.1	28.6	14.6	3.9	0.6	4.1	.9
Grade 8	333	33.9%	27.3	22.8	11.4	4.5	0.0	4.1	.9
Grade 10	270	0.0%	44.4	34.8	16.3	3.3	1.1	4.2	.9
Grade 12	83	6.0%	36.1	31.3	21.7	3.6	1.2	4.0	.9

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.10 *(Secondary) - Continued*

d. GRADE 11

Grade	N	No Experience at this level	Easy to Teach (5)	(4)	(3)	(2)	Difficult to Teach (1)	(Among those with experience) MEAN	S.D.
Total (Sec.)	594	41.8%	28.5	18.5	9.4	1.5	0.3	4.3	.9
Grade 8	295	61.4%	16.9	12.9	7.1	1.0	0.7	4.1	.9
Grade 10	216	30.6%	34.7	22.2	11.6	0.9	0.0	4.3	.8
Grade 12	83	1.2%	53.0	28.9	12.0	4.8	0.0	4.3	.9

e. GRADE 12

Grade	N	No Experience at this level	Easy to Teach (5)	(4)	(3)	(2)	Difficult to Teach (1)	(Among those with experience) MEAN	S.D.
Total (Sec.)	577	57.5%	21.8	10.9	6.4	2.8	0.5	4.2	1.0
Grade 8	285	77.5%	10.5	5.3	4.2	1.8	0.7	4.0	1.1
Grade 10	207	53.0%	25.1	13.0	4.8	2.9	0.5	4.3	1.0
Grade 12	85	0.0%	51.8	24.7	17.6	5.9	0.0	4.2	.9

Q.11 (Secondary) *Please mark the scale below according to whether you enjoy teaching mathematics at each of the following grade levels:*

a. GRADE 8

Grade	N	No Experience at this level	Enjoy Teaching (5)	(4)	(3)	(2)	Do Not Enjoy Teaching (1)	(Among those with experience) MEAN	S.D.
Total (Sec.)	714	6.2%	43.0	22.3	14.7	8.5	5.3	3.9	1.2
Grade 8	382	0.0%	51.6	26.2	13.1	6.3	2.9	4.2	1.1
Grade 10	250	11.6%	36.4	16.8	15.6	12.0	7.6	3.7	1.4
Grade 12	82	18.3%	23.2	20.7	19.5	8.5	9.8	3.5	1.3

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.11 *(Secondary) - Continued*

b. GRADE 9

Grade	N	No Experience at this level	Enjoy Teaching (5)	(4)	(3)	(2)	Do Not Enjoy Teaching (1)	(Among those with experience) MEAN	S.D.
Total (Sec.)	677	16.4%	39.7	24.2	13.7	3.4	2.5	4.1	1.0
Grade 8	344	22.1%	42.4	22.1	11.0	1.2	1.2	4.3	.9
Grade 10	251	9.6%	40.2	28.7	13.5	5.2	2.8	4.1	1.0
Grade 12	82	13.4%	26.8	19.5	25.6	7.3	7.3	3.6	1.2

c. GRADE 10

Grade	N	No Experience at this level	Enjoy Teaching (5)	(4)	(3)	(2)	Do Not Enjoy Teaching (1)	(Among those with experience) MEAN	S.D.
Total (Sec.)	687	16.9%	50.1	22.3	8.0	1.6	1.2	4.4	.8
Grade 8	331	33.5%	41.4	17.8	6.0	0.3	0.9	4.5	.8
Grade 10	273	0.0%	65.9	23.8	7.3	2.2	0.7	4.5	.8
Grade 12	83	6.0%	32.5	34.9	18.1	4.8	3.6	3.9	1.0

d. GRADE 11

Grade	N	No Experience at this level	Enjoy Teaching (5)	(4)	(3)	(2)	Do Not Enjoy Teaching (1)	(Among those with experience) MEAN	S.D.
Total (Sec.)	583	40.3%	44.6	10.8	3.4	0.7	0.2	4.7	.7
Grade 8	288	60.1%	27.8	9.0	2.4	0.3	0.3	4.6	.7
Grade 10	212	28.8%	55.2	9.9	5.2	0.9	0.0	4.7	.7
Grade 12	83	1.2%	75.9	19.3	2.4	1.2	0.0	4.7	.6

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.11 *(Secondary) - Continued*

e. GRADE 12

Grade	N	No Experience at this level	Enjoy Teaching (5)	(4)	(3)	(2)	Do Not Enjoy Teaching (1)	(Among those with experience) MEAN	S.D.
Total (Sec.)	564	55.9%	36.9	5.0	2.0	0.4	0.0	4.8	.6
Grade 8	273	76.6%	17.2	4.4	1.5	0.4	0.0	4.6	.7
Grade 10	205	51.7%	39.5	5.4	2.9	0.5	0.0	4.7	.6
Grade 12	86	0.0%	93.0	5.8	1.2	0.0	0.0	4.9	.3

Q.11 *(Elementary)* *Please rate each of the following subject areas individually*
Q.12 *(Secondary)* *according to how important you feel it is for the student's success in school:*

a. (ELEM.) ART

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1999	6.5%	17.1	44.4	23.3	8.8	2.9	1.0
Grade 1	499	7.6%	20.6	48.9	17.6	5.2	3.1	.9
Grade 3	496	7.3%	21.0	44.4	19.8	7.7	3.0	1.0
Grade 5	518	6.2%	14.5	40.9	27.8	10.6	2.8	1.0
Grade 7	486	4.7%	12.1	43.6	28.0	11.5	2.7	1.0

b. (SEC.) BUSINESS EDUCATION

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Sec.)	724	7.7%	18.2	45.3	19.9	8.8	3.0	1.0
Grade 8	374	7.2%	20.9	42.8	19.5	9.6	3.0	1.0
Grade 10	264	10.6%	14.8	45.8	20.1	8.7	3.0	1.1
Grade 12	86	1.2%	17.4	54.7	20.9	5.8	2.9	.8

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.11 (*Elementary*)
Q.12 (*Secondary*) - *Continued*

b. (SEC.) ENGLISH

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Sec.)	732	85.5%	11.3	2.7	0.3	0.1	4.8	.5
Grade 8	376	84.0%	13.0	2.7	0.3	0.0	4.8	.5
Grade 10	270	86.7%	10.4	2.6	0.4	0.0	4.8	.5
Grade 12	86	88.4%	7.0	3.5	0.0	1.2	4.8	.6

c. (SEC.) FINE ARTS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Sec.)	727	5.2%	10.7	42.0	28.7	13.3	2.7	1.0
Grade 8	373	6.4%	12.3	42.6	27.6	11.0	2.8	1.0
Grade 10	268	4.9%	10.8	39.6	28.7	16.0	2.6	1.0
Grade 12	86	1.2%	3.5	46.5	33.7	15.1	2.4	.8

b. (ELEM.) LANGUAGE ARTS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	2010	93.3%	5.8	0.7	0.0	0.0	4.9	.3
Grade 1	501	96.6%	2.8	0.6	0.0	0.0	5.0	.2
Grade 3	499	95.0%	4.4	0.4	0.2	0.0	4.9	.3
Grade 5	521	89.6%	9.4	1.0	0.0	0.0	4.9	.3
Grade 7	489	92.2%	6.5	1.0	0.0	0.2	4.9	.4

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.11 *(Elementary)*
Q.12 *(Secondary) - Continued*

c. (ELEM.)
d. (SEC.) MATHEMATICS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1978	73.2%	23.7	2.7	0.3	0.1	4.7	.5
Grade 1	495	71.9%	25.1	2.8	0.2	0.0	4.7	.5
Grade 3	491	79.4%	19.3	1.0	0.2	0.0	4.8	.4
Grade 5	512	69.3%	26.2	3.7	0.8	0.0	4.6	.6
Grade 7	480	72.3%	24.0	3.3	0.0	0.4	4.7	.6
Total (Sec.)	734	63.9%	30.8	5.0	0.1	0.1	4.6	.6
Grade 8	378	66.9%	29.1	3.7	0.3	0.0	4.6	.6
Grade 10	271	62.0%	31.4	6.6	0.0	0.0	4.6	.6
Grade 12	85	56.5%	36.5	5.9	0.0	1.2	4.5	.7

d. (ELEM.)
e. (SEC.) MUSIC

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1995	5.8%	18.2	44.1	23.3	8.6	2.9	1.0
Grade 1	499	6.2%	23.6	47.9	17.4	4.8	3.1	.9
Grade 3	494	5.5%	22.5	44.5	20.4	7.1	3.0	1.0
Grade 5	516	5.8%	14.1	40.5	28.9	10.7	2.8	1.0
Grade 7	486	5.6%	12.6	43.6	26.3	11.9	2.7	1.0
Total (Sec.)	722	4.0%	9.6	38.5	32.0	15.9	2.5	1.0
Grade 8	369	4.6%	9.2	42.8	29.8	13.6	2.6	1.0
Grade 10	267	4.1%	10.9	32.6	36.0	16.5	2.5	1.0
Grade 12	86	1.2%	7.0	38.4	29.1	24.4	2.3	1.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.11 (*Elementary*)
Q.12 (*Secondary*) - *Continued*

e. (ELEM.)
f. (SEC.) PHYSICAL EDUCATION

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1982	20.3%	34.6	34.8	7.6	2.6	3.6	1.0
Grade 1	495	20.0%	34.9	37.4	5.9	1.8	3.6	[illegible]
Grade 3	492	18.5%	37.4	34.1	6.7	3.3	3.6	1.0
Grade 5	510	20.0%	31.4	36.3	9.4	2.9	3.6	1.0
Grade 7	485	22.9%	34.8	31.3	8.5	2.5	3.7	1.0
Total (Sec.)	729	29.1%	28.9	28.0	9.5	4.5	3.7	1.1
Grade 8	375	31.7%	27.7	30.1	8.0	2.4	3.8	1.0
Grade 10	268	26.1%	31.7	26.9	9.3	6.0	3.6	1.1
Grade 12	86	26.7%	25.6	22.1	16.3	9.3	3.4	1.3

f. (ELEM.)
g. (SEC.) READING

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1998	95.8%	3.8	0.3	0.1	0.1	5.0	.2
Grade 1	500	97.4%	2.2	0.4	0.0	0.0	5.0	.2
Grade 3	495	95.4%	4.0	0.4	0.2	0.0	4.9	.3
Grade 5	517	95.4%	4.4	0.2	0.0	0.0	5.0	.2
Grade 7	486	95.1%	4.5	0.2	0.0	0.2	4.9	.3
Total (Sec.)	733	89.4%	9.5	1.0	0.0	0.1	4.9	.4
Grade 8	375	89.6%	9.9	0.5	0.0	0.0	4.9	.3
Grade 10	272	91.5%	7.4	1.1	0.0	0.0	4.9	.3
Grade 12	86	81.4%	15.1	2.3	0.0	1.2	4.8	.6

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.11 *(Elementary)*
Q.12 *(Secondary) - Continued*

g. (ELEM.)
h. (SEC.) SCIENCE

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	2005	9.2%	45.2	40.3	4.6	0.6	3.6	.7
Grade 1	501	9.4%	40.5	44.3	5.0	0.8	3.5	.8
Grade 3	498	8.8%	47.4	38.6	4.6	0.6	3.6	.7
Grade 5	518	8.7%	43.1	42.5	5.3	0.6	3.5	.7
Grade 7	488	10.0%	50.2	35.7	3.7	0.4	3.7	.7
Total (Sec.)	732	25.4%	45.1	26.8	2.3	0.4	3.9	.8
Grade 8	377	27.6%	45.4	24.9	2.1	0.0	4.0	.8
Grade 10	269	23.8%	44.2	28.3	3.0	0.7	3.9	.8
Grade 12	86	20.9%	46.5	30.2	1.2	1.2	3.8	.8

h. (ELEM.)
i. (SEC.) SOCIAL STUDIES

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	2001	12.2%	48.7	25.5	3.0	0.5	3.7	.7
Grade 1	499	9.6%	42.1	42.5	4.8	1.0	3.5	.8
Grade 3	496	9.9%	51.2	34.5	4.0	0.4	3.7	.7
Grade 5	518	14.9%	50.4	32.2	1.9	0.6	3.8	.7
Grade 7	488	14.3%	51.0	33.3	1.4	0.2	3.8	.7
Total (Sec.)	733	23.6%	42.4	29.7	4.1	1.4	3.8	.9
Grade 8	377	22.6%	42.4	29.2	4.0	0.8	3.8	.9
Grade 10	270	16.3%	42.2	28.9	4.1	2.2	3.8	.9
Grade 12	86	22.4%	43.0	34.9	4.7	1.2	3.7	.8

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.11 (*Elementary*)
Q.12 (*Secondary*) - *Continued*

j. (SEC.) VOCATIONAL EDUCATION

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Sec.)	732	11.7%	23.8	44.3	13.9	5.9	3.2	1.0
Grade 8	377	14.1%	25.5	45.6	12.5	4.8	3.3	1.0
Grade 10	269	8.1%	23.4	43.1	12.3	7.1	3.2	1.1
Grade 12	86	12.2%	17.4	41.9	25.6	7.0	2.9	1.0

Q.12 (*Elementary*)
Q.13 (*Secondary*)

Please rate each of the following subject areas individually according to how important you feel it is for the student's adult life:

a. (ELEM.) ART

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1980	8.9%	19.9	42.4	21.7	7.0	3.0	1.0
Grade 1	491	11.2%	18.9	45.4	19.6	4.9	3.1	1.0
Grade 3	495	10.9%	22.0	41.8	19.2	6.1	3.1	1.0
Grade 5	513	6.6%	20.9	40.4	23.8	8.4	2.9	1.0
Grade 7	481	7.1%	17.9	42.2	24.1	8.7	2.9	1.0

a. (SEC.) BUSINESS EDUCATION

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Sec.)	729	23.3%	36.9	32.2	6.9	0.7	3.8	.9
Grade 8	374	25.9%	38.2	29.7	5.9	0.3	3.8	.9
Grade 10	269	23.0%	33.1	35.7	7.4	0.7	3.7	.9
Grade 12	86	12.8%	43.0	32.6	9.3	2.3	3.5	.9

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.12 *(Elementary)*
Q.13 *(Secondary) - Continued*

b. (SEC.) ENGLISH

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Sec.)	735	69.3%	22.7	7.5	0.5	0.0	4.6	.6
Grade 8	377	70.3%	20.7	8.5	0.5	0.0	4.6	.7
Grade 10	271	68.3%	25.1	5.9	0.7	0.0	4.6	.6
Grade 12	87	67.8%	24.1	8.0	0.0	0.0	4.6	.6

c. (SEC.) FINE ARTS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Sec.)	731	5.5%	17.5	44.0	22.3	10.7	2.8	1.0
Grade 8	375	6.1%	17.6	44.0	21.9	10.4	2.9	1.0
Grade 10	270	5.2%	19.6	41.9	22.6	10.7	2.9	1.0
Grade 12	86	3.5%	10.5	51.2	23.3	11.6	2.7	.9

b. (ELEM.) LANGUAGE ARTS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	2004	75.6%	18.9	5.1	0.3	0.1	4.7	.6
Grade 1	500	83.0%	13.6	3.2	0.2	0.0	4.8	.5
Grade 3	497	79.7%	16.7	3.2	0.4	0.0	4.8	.5
Grade 5	518	69.1%	23.7	6.4	0.2	0.6	4.6	.7
Grade 7	489	70.8%	21.3	7.6	0.4	0.0	4.6	.6

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.12 (*Elementary*)
Q.13 (*Secondary*) - *Continued*

c. (ELEM.)
d. (SEC.) MATHEMATICS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1988	52.9%	32.6	12.7	1.6	0.2	4.4	.8
Grade 1	496	56.7%	31.3	10.7	1.2	0.2	4.4	.7
Grade 3	489	58.3%	32.1	8.6	1.0	0.0	4.5	.7
Grade 5	517	49.9%	30.0	18.0	1.9	0.2	4.3	.8
Grade 7	486	46.9%	37.4	13.4	2.1	0.2	4.3	.8
Total (Sec.)	737	43.3%	37.6	17.1	1.8	0.3	4.2	.8
Grade 8	378	46.8%	37.3	14.0	1.9	0.0	4.3	.8
Grade 10	272	40.4%	39.3	18.4	1.5	0.4	4.2	.8
Grade 12	87	36.8%	33.3	26.4	2.3	1.1	4.0	.9

d. (ELEM.)
e. (SEC.) MUSIC

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1984	9.7%	23.5	44.3	17.8	4.7	3.2	1.0
Grade 1	492	10.2%	25.4	45.9	15.0	3.5	3.2	.9
Grade 3	490	12.0%	26.1	43.1	15.5	3.3	3.3	1.0
Grade 5	517	8.1%	21.7	46.2	18.6	5.4	3.1	1.0
Grade 7	485	8.7%	20.8	41.6	22.3	6.6	3.0	1.0
Total (Sec.)	726	5.4%	14.5	46.0	23.1	11.0	2.8	1.0
Grade 8	372	5.1%	13.4	47.3	23.1	11.0	2.8	1.0
Grade 10	267	6.0%	16.1	43.1	24.7	10.1	2.8	1.0
Grade 12	87	4.6%	13.8	49.4	18.4	13.8	2.8	1.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.12 *(Elementary)*
Q.13 *(Secondary) - Continued*

e. (ELEM.)
f. (SEC.) PHYSICAL EDUCATION

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1972	30.4%	36.2	27.0	5.0	1.4	3.9	.9
Grade 1	490	28.4%	38.8	26.9	4.7	1.2	3.9	.9
Grade 3	489	30.1%	35.6	29.0	4.1	1.2	3.9	.9
Grade 5	515	28.9%	35.9	28.2	5.6	1.4	3.8	.9
Grade 7	478	34.5%	34.3	23.8	5.4	1.9	3.9	1.0
Total (Sec.)	731	33.2%	30.8	25.2	7.3	3.6	3.8	1.1
Grade 8	378	35.2%	29.1	24.6	7.1	4.0	3.8	1.1
Grade 10	266	31.6%	33.8	23.7	8.3	2.6	3.8	1.0
Grade 12	87	29.9%	28.7	32.2	4.6	4.6	3.7	1.1

f. (ELEM.)
g. (SEC.) READING

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	2003	88.3%	9.8	1.8	0.1	0.0	4.9	.4
Grade 1	500	92.0%	6.8	1.2	0.0	0.0	4.9	.3
Grade 3	498	90.0%	8.4	1.6	0.0	0.0	4.9	.4
Grade 5	518	85.1%	12.0	2.7	0.2	0.0	4.8	.5
Grade 7	487	86.0%	11.9	1.8	0.2	0.0	4.8	.4
Total (Sec.)	740	78.9%	16.8	3.8	0.5	0.0	4.7	.5
Grade 8	379	80.2%	15.0	4.0	0.8	0.0	4.7	.6
Grade 10	273	79.9%	17.6	2.2	0.4	0.0	4.8	.5
Grade 12	88	70.5%	21.6	8.0	0.0	0.0	4.6	.6

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.12 *(Elementary)*
Q.13 *(Secondary) - Continued*

g. (ELEM.)
h. (SEC.) SCIENCE

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	2000	9.0%	33.8	46.4	9.9	0.9	3.4	.8
Grade 1	498	11.8%	32.7	46.2	8.4	0.8	3.5	.8
Grade 3	496	10.7%	38.7	43.5	6.3	0.8	3.5	.8
Grade 5	519	6.9%	29.3	48.6	14.1	1.2	3.3	.8
Grade 7	487	6.6%	34.7	47.2	10.7	0.8	3.4	.8
Total (Sec.)	736	11.7%	35.2	42.0	9.5	1.6	3.5	.9
Grade 8	378	14.0%	32.3	42.6	9.8	1.3	3.5	.9
Grade 10	271	9.6%	37.6	39.5	11.4	1.8	3.4	.9
Grade 12	87	8.0%	40.2	47.1	2.3	2.3	3.5	.8

h. (ELEM.)
i. (SEC.) SOCIAL STUDIES

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	2001	16.3%	39.9	37.4	5.6	0.7	3.6	.8
Grade 1	500	16.0%	40.2	37.4	6.0	0.4	3.6	.8
Grade 3	495	17.6%	42.8	35.8	3.4	0.4	3.7	.8
Grade 5	518	17.6%	38.0	37.6	5.6	1.2	3.6	.9
Grade 7	488	13.9%	38.7	38.7	7.6	1.0	3.6	.9
Total (Sec.)	737	16.0%	34.6	38.3	8.7	2.4	3.5	.9
Grade 8	378	17.5%	35.2	36.5	8.7	2.1	3.6	.9
Grade 10	272	15.8%	35.7	36.8	9.6	2.2	3.5	.9
Grade 12	87	10.3%	28.7	50.6	5.7	4.6	3.3	.9

B.C. Mathematics Assessment - Teacher Questionnaire

PART I - BACKGROUND AND GENERAL INFORMATION

Q.12 (*Elementary*)
Q.13 (*Secondary*) - *Continued*

J. (SEC.) VOCATIONAL EDUCATION

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Sec.)	734	25.3%	39.2	27.4	6.8	1.2	3.8	.9
Grade 8	378	28.3%	39.2	27.0	5.0	0.5	3.9	.9
Grade 10	270	25.2%	40.0	25.2	8.5	1.1	3.8	1.0
Grade 12	86	12.8%	37.2	36.0	9.3	4.7	3.4	1.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Grade 1 Teachers Only

Q.13A (*Elementary*)

In the list below are some of the learning outcomes one might have for a Grade 1 mathematics program. Using the scale provided, please mark the items according to the importance you give each.

The total Grade 1 mathematics program should prepare the child so that he/she is able to:

	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
a. Recall with reasonable speed and accuracy the addition, subtraction and multiplication facts to 10.	558	68.3%	20.4	8.1	2.3	0.9	4.5	.8
b. Recognize the role of zero in addition.	566	52.7%	27.9	16.3	2.3	0.9	4.3	.9
c. Relate multiplication to repeated addition using products to 10.	571	17.2%	20.5	31.2	17.5	13.7	3.1	1.3
d. Solve simple problems involving addition and subtraction.	570	56.8%	28.9	11.8	2.1	0.4	4.4	.8
e. Group by tens and ones and relate this to place value.	561	46.2%	30.8	16.9	3.4	2.7	4.1	1.0
f. Classify geometric shapes.	563	21.5%	27.5	35.7	12.3	3.0	3.5	1.0
g. Use the centimetre to measure and compare lengths.	564	20.9%	32.1	33.3	9.9	3.7	3.6	1.0

Grade 3 Teachers Only

Q.13B (*Elementary*)

In the list below are some of the learning outcomes one might have for a Grade 3 mathematics program. Please mark the items according to the importance you give each.

The total Grade 3 mathematics program should prepare the child so that he/she is able to:

	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
a. Use expanded notation in renaming numbers to 9,999.	564	30.1%	34.0	25.7	7.4	2.7	3.8	1.0
b. Round off numbers to the nearest 10 or 100.	567	14.8%	30.9	37.9	12.9	3.5	3.4	1.0
c. Understand the place value of numerals to 9,999.	566	67.3%	22.4	7.8	1.9	0.5	4.5	.8

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Q.13B (*Elementary*) - *Continued*

	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
d. Read and write Roman numerals to 12.	568	5.8%	7.2	27.1	38.2	21.7	2.4	1.1
e. Solve addition and subtraction examples with 2, 3 and 4 digit numerals, with and without regrouping.	568	84.7%	12.9	2.1	0.2	0.2	4.8	.5
f. Solve multiplication examples for products to 50.	568	76.8%	18.3	4.0	0.5	0.4	4.7	.6
g. Recall multiplication facts to 50.	570	70.7%	21.4	6.5	1.1	0.4	4.6	.7
h. Construct simple geometric models of solids and plane shapes.	566	4.2%	19.1	44.0	25.4	7.2	2.9	.9
i. Translate a word problem into mathematical symbols and solve using appropriate operations.	568	55.6%	31.3	10.4	2.1	0.5	4.4	.8
j. Recognize axis of symmetry from experience with concrete materials.	559	3.2%	11.3	44.5	27.0	14.0	2.6	1.0
k. Use graphs as a means of recording.	566	8.7%	29.0	43.5	14.7	4.2	3.2	.9
l. Estimate and measure capacity in millilitres and litres.	567	15.3%	30.0	39.5	12.7	2.5	3.4	1.0
m. Estimate and measure length in metric units to kilometres.	564	19.7%	38.3	33.0	7.6	1.4	3.7	.9
n. Determine mass by balancing in grams and kilograms.	566	11.8%	28.1	40.3	15.0	4.8	3.3	1.0
o. Determine area by covering two dimensional spaces with centimetre squares.	568	8.6%	22.0	42.1	21.1	6.2	3.1	1.0
p. Read a thermometer in degrees Celsius.	569	24.4%	32.5	34.8	7.0	1.2	3.7	1.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Grade 5 Teachers Only

Q.13C (*Elementary*)

In the list below are some of the learning outcomes one might have for a Grade 5 mathematics program. Please mark the items according to the importance you give each.

The total Grade 5 mathematics program should prepare the child so that he/she is able to:

	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
a. Recall basic number facts.	565	89.4%	8.0	2.7	0.0	0.0	4.9	.4
b. Indicate place value of each digit of a numeral in standard notation.	564	64.7%	24.3	9.8	1.1	0.2	4.5	.7
c. Write numbers in expanded notation.	554	15.5%	33.0	34.1	12.8	4.5	3.4	1.0
d. Regroup as required for algorithms.	547	28.0%	31.1	30.0	7.5	3.5	3.7	1.1
e. Express a number as a product of its prime factors.	565	20.7%	30.1	34.0	12.7	2.5	3.5	1.0
f. Use the addition algorithm with whole numbers, common fractions, and decimal fractions (to 100ths).	560	57.5%	27.3	12.3	2.0	0.9	4.4	.8
g. Use the subtraction algorithm with whole numbers, common fractions and decimal fractions (to 100ths).	559	56.0%	28.8	11.6	2.9	0.7	4.4	.8
h. Use the multiplication algorithm with whole numbers, common fractions and decimal fractions (to whole number X 1,000ths).	559	47.2%	30.1	15.7	5.4	1.6	4.2	1.0
i. Use the division algorithm with whole numbers.	561	63.8%	25.0	9.6	1.2	0.4	4.5	.7
j. Identify and list properties of common three dimensional geometrical forms.	562	5.7%	21.9	49.8	18.3	4.3	3.1	.9
k. Identify the circle and its parts.	558	4.3%	17.6	46.8	24.4	7.0	2.9	.9

PART II - LEARNING OUTCOMES

Q.13C *(Elementary) - Continued*

	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
l. Perform experiments involving translations, reflections, rotations, and flips.	552	0.9	7.2	25.9	34.2	31.7	2.1	1.0
m. Perform investigations and arrive at conclusions related to tiling (tessellations).	530	1.5%	7.0	27.4	29.1	35.1	2.1	1.0
n. Use instruments to measure length, area, volume, capacity, mass and temperature in metric units.	562	40.0%	33.6	21.7	3.9	0.7	4.1	.9
o. Construct and solve word problems arising out of investigations.	556	46.2%	34.5	14.9	3.1	1.3	4.2	.9
p. Interpret graphs.	564	19.5%	41.1	30.9	7.6	0.9	3.7	.9
q. Construct graphs.	564	13.7%	34.2	38.1	11.0	3.0	3.4	1.0

Q.13D *(Elementary)*

Grade 7 Teachers Only

In the list below are some of the learning outcomes one might have for a Grade 7 mathematics program. Please mark the items according to the importance you give each.

The total Grade 7 mathematics program should prepare the student so that he/she is able to:

	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
a. State the value represented by each digit in a multi-digit decimal numeral.	546	61.9%	26.0	11.0	0.7	0.4	4.5	.7
b. Write a decimal numeral in expanded form using powers of 10 in exponent form.	542	11.4%	26.9	37.1	19.7	4.8	3.2	1.0
c. Perform in the correct order, a calculation involving more than one of the four basic operations.	546	61.5%	28.6	8.6	0.9	0.4	4.5	.7

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Q.13D (*Elementary*) - *Continued*

	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
d. Perform the operations of addition, subtraction, multiplication and division with whole numbers, common fractions and decimal fractions.	545	89.4%	9.2	1.3	0.2	0.0	4.9	.4
e. Write a whole number as a product of its prime factors.	543	13.3%	32.8	37.9	12.5	3.5	3.4	1.0
f. Calculate the greatest common factor (GCF) of two or more whole numbers.	542	15.9%	35.2	37.1	9.6	2.2	3.5	.9
g. Calculate the least common multiple (LCM) of two or more whole numbers.	541	18.3%	35.1	36.4	7.8	2.4	3.6	1.0
h. Write sets of equivalent fractions.	540	35.9%	34.4	22.6	5.9	1.1	4.0	1.0
i. Write a decimal numeral for a fraction numeral and vice-versa.	545	45.5%	38.3	13.6	2.2	0.4	4.3	.8
j. Write a percent numeral for a fraction numeral or a decimal numeral.	545	45.9%	38.7	12.5	2.6	0.4	4.3	.8
k. Solve simple open sentences.	541	56.4%	30.1	11.6	1.3	0.6	4.4	.8
l. Use a compass and straight-edge to copy an angle.	541	11.8%	25.0	44.0	17.0	2.2	3.3	1.0
m. Use a compass and straight-edge to bisect an angle.	544	8.8%	22.8	44.1	19.7	4.6	3.1	1.0
n. Identify from a diagram, or draw a diagram illustrating acute, right and obtuse angles.	544	10.7%	23.5	41.9	20.2	3.7	3.2	1.0
o. Use instruments to measure length, area, volume, capacity, mass and temperature in metric units.	544	45.8%	36.8	15.1	1.8	0.6	4.2	.8

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Q.13D *(Elementary) - Continued*

		N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
p.	Translate word problems into open sentences.	542	44.6%	36.3	15.7	2.8	0.6	4.2	.8
q.	Construct a flow chart to fit a verbal description of an operation or procedure.	544	11.0%	27.2	39.2	16.5	6.1	3.2	1.0
r.	Test the appropriateness of an answer to a problem.	545	53.4%	33.4	11.4	1.7	0.2	4.4	.8
s.	Draw or interpret scale diagrams.	541	17.4%	37.7	37.7	6.5	0.7	3.6	.9
t.	Solve problems involving percent.	543	47.1%	35.7	14.5	2.4	0.2	4.3	.8
u.	Calculate perimeters of rectangles and triangles.	545	26.4%	38.7	28.8	4.8	1.3	3.8	.9

Grade 8 Teachers Only

Q.14A *(Secondary)*

In the list below are some of the learning outcomes one might expect of a Grade 8 mathematics program. Using the scale provided, please mark the items according to the importance you give each.

The total Grade 8 mathematics program should prepare each student so that he/she is able to:

		N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
a.	Use set notation.	375	5.1%	15.5	37.9	23.7	17.9	2.7	1.1
b.	State the value represented by each digit in a multi-digit decimal numeral.	379	58.3%	25.6	13.5	2.1	0.5	4.4	.8
c.	Write decimal numerals in expanded form using powers of ten in exponent form.	378	11.6%	28.8	41.5	13.8	4.2	3.3	1.0
d.	Write decimal numerals in scientific notation.	377	9.0%	24.6	42.7	18.3	5.8	3.1	1.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Q.14A (*Secondary*) - *Continued*

	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
e. Perform the four basic operations with whole numbers, common fractions and decimal fractions.	380	95.5%	2.4	1.6	0.5	0.0	4.9	.4
f. Perform the four basic operations with integers.	377	82.0%	10.9	5.0	1.6	0.5	4.7	.7
g. Round a decimal numeral to a specified place value.	378	34.9%	34.4	25.1	4.8	0.8	4.0	.9
h. Write a whole number as a product of its prime factors.	379	16.9%	28.0	37.5	14.2	3.4	3.4	1.0
i. Calculate the GCF of two or more numbers.	378	17.2%	31.0	34.9	13.5	3.4	3.4	1.0
j. Calculate the LCM of two or more numbers.	377	19.4%	31.6	32.9	12.2	4.0	3.5	1.1
k. Write a decimal numeral, fraction numeral and percent numeral for any number given in one of the three forms.	379	62.5%	31.1	5.8	0.5	0.0	4.6	.6
l. Use a table to find the approximate square root of a number.	379	16.4%	29.3	33.0	15.8	5.5	3.4	1.1
m. Perform, in conventional order, a calculation involving a series of operations.	380	59.2%	26.3	12.9	1.3	0.3	4.4	.8
n. Solve simple open sentences.	376	54.5%	32.4	10.9	1.9	0.3	4.4	.8
o. Use a compass and straight-edge to bisect an angle and bisect a line segment.	380	15.8%	28.2	36.3	15.3	4.5	3.4	1.1
p. Use a compass and straight-edge to construct a perpendicular to a line from a point not on the line and parallel to a line through a given point.	378	11.9%	24.9	39.2	18.5	5.6	3.2	1.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Q.14A *(Secondary) - Continued*

	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
q. Use the Pythagorean theorem to calculate any side of a right triangle.	377	18.8%	39.8	28.6	8.5	4.2	3.6	1.0
r. Translate verbal problems into open sentences.	376	43.9%	31.9	20.5	2.7	1.1	4.1	.9
s. Construct a flow chart to fit a verbal description.	376	7.4%	17.3	32.2	26.1	17.0	2.7	1.2
t. Test the appropriateness of an answer to a problem.	377	54.1%	27.1	15.6	2.7	0.5	4.3	.9
u. Draw or interpret scale drawings.	378	12.7%	29.1	36.0	13.5	8.7	3.2	1.1
v. Solve problems involving percent.	377	56.2%	32.1	10.9	0.8	0.0	4.4	.7
w. Calculate perimeters and areas of circles, rectangles and triangles.	378	37.8%	39.4	19.0	3.4	0.3	4.1	.8

Grade 10 Teachers Only

Q.14B *(Secondary)*

In the list below are some of the learning outcomes one might have for a Grade 10 mathematics program. Please mark the items according to the importance you give each.

The total Grade 10 mathematics program should prepare the student so that he/she is able to:

	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
a. Perform the four basic operations with whole numbers, common fractions, decimal fractions.	272	85.7%	7.7	3.3	2.6	0.7	4.8	.7
b. Perform the four basic operations with integers.	271	77.9%	12.9	5.9	3.0	0.4	4.6	.8

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Q.14B *(Secondary) - Continued*

	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
c. Write a decimal numeral, fraction numeral and percent numeral for any number given in one of the three forms.	270	64.8%	21.9	10.7	2.2	0.4	4.5	.8
d. Distinguish between rational and irrational numbers by their decimal forms.	271	18.8%	25.1	27.7	19.2	9.2	3.2	1.2
e. Calculate products and quotients using scientific notation.	270	14.4%	35.9	31.9	12.6	5.2	3.4	1.0
f. Use the axioms of the real numbers.	267	19.1%	24.7	32.2	13.9	10.1	3.3	1.2
g. Use the laws of exponents in simplifying expressions with integral exponents.	269	34.2%	32.0	25.7	5.9	2.2	3.9	1.0
h. Add and multiply poynomials.	269	40.9%	32.0	21.6	3.0	2.6	4.1	1.0
i. Divide a given polynomial by a (linear) binomial.	269	23.0%	26.8	32.0	11.9	6.3	3.5	1.2
j. Write the square of any binomial as a trinomial.	268	35.4%	28.0	24.3	7.8	4.5	3.8	1.1
k. Factor a quadratic trinomial.	267	35.2%	27.0	25.8	7.5	4.5	3.8	1.1
l. Solve systems of linear equations.	269	43.5%	30.1	18.2	5.6	2.6	4.1	1.0
m. Solve word problems algebraically.	270	52.2%	33.7	11.5	2.2	0.4	4.4	.8
n. Given an equation in two variables, graph the equation in the coordinate plane.	269	40.5%	34.9	17.8	3.0	3.7	4.1	1.0
o. Calculate one side of a right angle triangle given the other two sides.	270	48.1%	34.1	14.8	1.5	1.5	4.3	.9

PART II - LEARNING OUTCOMES

Q.14B *(Secondary) - Continued*

	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
p. Determine whether two triangles are similar.	269	27.1%	33.5	25.3	11.5	2.6	3.7	1.1
q. Specify the sine, cosine, and tangent of an acute angle as the ratio of two sides of a right triangle.	269	23.4%	26.4	29.7	13.0	7.4	3.4	1.2
r. Calculate the resultant vector for two given vectors by a scale diagram.	265	8.3%	15.5	35.1	23.4	17.7	2.7	1.2
s. Solve problems involving simple interest.	272	41.9%	33.1	19.9	4.0	1.1	4.1	.9
t. Explain the meaning of compound interest.	271	32.1%	29.9	26.6	8.9	2.6	3.8	1.1
u. Explain the nature of annuities.	268	13.1%	18.7	32.5	22.4	13.4	3.0	1.2
v. Calculate the true rate of interest in instalment payments when given the formula.	270	25.2%	22.6	28.5	16.7	7.0	3.4	1.2
w. Use elementary BASIC as a programming language to write, execute and debug simple programs.	259	4.2%	8.9	23.6	24.7	38.6	2.2	1.2

Q.15 *(Secondary)*

In the list below are some of the learning outcomes for the elementary school mathematics program one might want a student entering Grade 8 to have. All teachers: please mark the items according to the importance you give each.

The total elementary school mathematics program should prepare the student so that he/she is able to:

a. STATE THE VALUE REPRESENTED BY EACH DIGIT IN A MULTI-DIGIT DECIMAL NUMERAL

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	682	84.2%	14.7	1.2	2.8	.4
Grade 8	357	83.2%	16.2	0.6	2.8	.4
Grade 10	236	86.0%	12.7	1.3	2.8	.4
Grade 12	89	83.1%	13.5	3.4	2.8	.5

PART II - LEARNING OUTCOMES

Q.15 *(Secondary) - Continued*

b. WRITE A DECIMAL NUMERAL IN EXPANDED FORM USING POWERS OF 10 IN EXPONENT FORM

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	682	14.7%	56.9	28.4	1.9	.6
Grade 8	358	9.8%	57.3	33.0	1.8	.6
Grade 10	235	17.9%	59.1	23.0	1.9	.6
Grade 12	89	25.8%	49.4	24.7	2.0	.7

c. PERFORM IN THE CORRECT ORDER, A CALCULATION INVOLVING MORE THAN ONE OF THE FOUR BASIC OPERATIONS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	683	72.0%	25.0	2.9	2.7	.5
Grade 8	358	67.9%	29.6	2.5	2.6	.5
Grade 10	236	75.4%	21.2	3.4	2.7	.5
Grade 12	89	79.8%	16.9	3.4	2.8	.5

d. PERFORM THE OPERATIONS OF ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION WITH WHOLE NUMBERS, COMMON FRACTIONS AND DECIMAL FRACTIONS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	684	95.8%	4.1	0.1	3.0	.2
Grade 8	359	96.1%	3.6	0.3	3.0	.2
Grade 10	236	94.9%	5.1	0.0	3.0	.2
Grade 12	89	96.6%	3.4	0.0	3.0	.2

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Q.15 *(Secondary) - Continued*

e. WRITE A WHOLE NUMBER AS A PRODUCT OF ITS PRIME FACTORS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	680	30.6%	54.1	15.3	2.2	.7
Grade 8	357	22.1%	56.3	21.6	2.0	.7
Grade 10	234	38.9%	52.6	8.5	2.3	.6
Grade 12	89	42.7%	49.4	7.9	2.3	.6

f. CALCULATE THE GREATEST COMMON FACTOR (GCF) OF TWO OR MORE WHOLE NUMBERS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	682	28.4%	53.2	18.3	2.1	.7
Grade 8	360	21.9%	56.1	21.9	2.0	.7
Grade 10	234	37.2%	49.6	13.2	2.2	.7
Grade 12	88	31.8%	51.1	17.0	2.1	.7

g. CALCULATE THE LEAST COMMON MULTIPLE (LCM) OF TWO OR MORE WHOLE NUMBERS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	679	33.9%	50.5	15.6	2.2	.7
Grade 8	358	27.1%	54.2	18.7	2.1	.7
Grade 10	234	41.5%	47.4	11.1	2.3	.7
Grade 12	87	41.4%	43.7	14.9	2.3	.7

PART II - LEARNING OUTCOMES

Q.15 *(Secondary) - Continued*

h. WRITE SETS OF EQUIVALENT FACTORS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	684	72.4%	24.7	2.9	2.7	.5
Grade 8	360	69.7%	26.7	3.6	2.7	.5
Grade 10	235	77.9%	20.9	1.3	2.8	.5
Grade 12	89	68.5%	27.0	4.5	2.6	.6

i. WRITE A DECIMAL NUMERAL FOR A FRACTION NUMERAL OR VICE-VERSA

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	681	70.2%	28.0	1.8	2.7	.5
Grade 8	357	66.9%	30.5	2.5	2.6	.5
Grade 10	235	73.2%	26.0	0.9	2.7	.5
Grade 12	89	75.3%	23.6	1.1	2.7	.5

j. WRITE A PERCENT NUMERAL FOR A FRACTION NUMERAL OR A DECIMAL NUMERAL

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	680	60.0%	35.6	4.4	2.6	.6
Grade 8	358	54.5%	40.2	5.3	2.5	.6
Grade 10	233	64.4%	33.0	2.6	2.6	.5
Grade 12	89	70.8%	23.6	5.6	2.7	.6

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Q.15 *(Secondary) - Continued*

k. SOLVE SIMPLE OPEN SENTENCES

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	681	37.3%	44.1	18.6	2.2	.7
Grade 8	359	31.5%	46.8	21.7	2.1	.7
Grade 10	234	42.7%	39.7	17.5	2.3	.7
Grade 12	88	46.6%	44.3	9.1	2.4	.6

l. USE A COMPASS AND STRAIGHT-EDGE TO COPY AN ANGLE

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	683	15.2%	42.5	42.3	1.7	.7
Grade 8	359	13.1%	37.9	49.0	1.6	.7
Grade 10	235	19.6%	46.8	33.6	1.9	.7
Grade 12	89	12.4%	49.4	38.2	1.7	.7

m. USE A COMPASS AND STRAIGHT-EDGE TO BISECT AN ANGLE

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	682	12.8%	40.9	46.5	1.7	.7
Grade 8	358	11.5%	36.9	51.7	1.6	.7
Grade 10	235	15.7%	45.1	39.1	1.8	.7
Grade 12	89	10.1%	44.9	44.9	1.7	.7

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Q.15 *(Secondary) - Continued*

n. IDENTIFY FROM A DIAGRAM, OR DRAW A DIAGRAM ILLUSTRATING ACUTE, RIGHT AND OBTUSE ANGLES

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	683	19.5%	46.4	34.1	1.9	.7
Grade 8	359	18.4%	42.9	38.7	1.8	.7
Grade 10	235	20.4%	49.8	29.8	1.9	.7
Grade 12	89	21.3%	51.7	27.0	1.9	.7

o. USE INSTRUMENTS TO MEASURE LENGTH, AREA, VOLUME, CAPACITY, MASS AND TEMPERATURE IN METRIC UNITS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	683	51.4%	37.6	11.0	2.4	.7
Grade 8	359	51.0%	37.0	12.0	2.4	.7
Grade 10	235	51.9%	38.3	9.8	2.4	.7
Grade 12	89	51.7%	38.2	10.1	2.4	.7

p. TRANSLATE WORD PROBLEMS INTO OPEN SENTENCES

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	679	29.7%	50.7	19.6	2.1	.7
Grade 8	356	28.7%	50.3	21.1	2.1	.7
Grade 10	234	28.2%	53.4	18.4	2.1	.7
Grade 12	89	38.2%	44.9	16.9	2.2	.7

PART II - LEARNING OUTCOMES

Q.15 *(Secondary) - Continued*

q. CONSTRUCT A FLOW CHART TO FIT A VERBAL DESCRIPTION

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	677	7.5%	40.0	52.4	1.6	.6
Grade 8	354	7.9%	40.1	52.0	1.6	.6
Grade 10	235	5.5%	40.4	54.0	1.5	.6
Grade 12	88	11.4%	38.6	50.0	1.6	.7

r. TEST THE APPROPRIATENESS OF AN ANSWER TO A PROBLEM

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	680	63.8%	32.1	4.1	2.6	.6
Grade 8	356	61.5%	33.4	5.1	2.6	.6
Grade 10	235	65.5%	31.5	3.0	2.6	.5
Grade 12	89	68.5%	28.1	3.4	2.7	.5

s. DRAW OR INTERPRET SCALE DIAGRAMS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	681	12.0%	52.6	35.4	1.8	.6
Grade 8	358	10.9%	50.8	38.3	1.7	.6
Grade 10	234	11.5%	55.6	32.9	1.8	.6
Grade 12	89	18.0%	51.7	30.3	1.9	.7

PART II - LEARNING OUTCOMES

Q.15 *(Secondary) - Continued*

t. SOLVE PROBLEMS INVOLVING PERCENT

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	682	45.3%	43.8	10.9	2.3	.7
Grade 8	358	41.9%	46.6	11.5	2.3	.7
Grade 10	235	46.0%	43.0	11.1	2.3	.7
Grade 12	89	57.3%	34.8	7.9	2.5	.6

u. CALCULATE PERIMETERS OF RECTANGLES AND TRIANGLES

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Sec.)	682	46.8%	43.4	9.8	2.4	.7
Grade 8	358	42.5%	46.1	11.5	2.3	.7
Grade 10	235	49.8%	41.7	8.5	2.4	.6
Grade 12	89	56.2%	37.1	6.7	2.5	.6

Q.14 *(Elementary)* *Please catagorize each of the following learning outcomes according*
Q.16 *(Secondary)* *to the importance you attach to each:*

Upon graduation from secondary school, every student should be able to:

a. ACCURATELY PERFORM THE FOUR BASIC OPERATIONS WITH WHOLE NUMBERS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Elem.)	1826	98.4%	1.6	0.0	3.0	.1
Grade 1	444	97.3%	2.7	0.0	3.0	.2
Grade 3	439	99.5%	0.5	0.0	3.0	.1
Grade 5	463	98.3%	1.7	0.0	3.0	.1
Grade 7	480	98.3%	1.7	0.0	3.0	.1
Total (Sec.)	744	99.5%	0.5	0.0	3.0	.1
Grade 8	381	99.7%	0.3	0.0	3.0	.1
Grade 10	274	100.0%	0.0	0.0	3.0	.0
Grade 12	89	96.6%	3.4	0.0	3.0	.2

PART II - LEARNING OUTCOMES

Q.14 *(Elementary)*
Q.16 *(Secondary)* - *Continued*

b. ACCURATELY PERFORM THE FOUR BASIC OPERATIONS WITH COMMON FRACTIONS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Elem.)	1816	62.9%	33.5	3.6	2.6	.6
Grade 1	438	61.0%	35.2	3.9	2.6	.6
Grade 3	438	63.0%	33.6	3.4	2.6	.6
Grade 5	461	61.6%	33.6	4.8	2.6	.6
Grade 7	479	65.8%	31.9	2.3	2.6	.5
Total (Sec.)	744	93.1%	6.7	0.1	.29	.3
Grade 8	381	92.7%	7.1	0.3	2.9	.3
Grade 10	274	93.8%	6.2	0.0	2.9	.2
Grade 12	89	93.3%	6.7	0.0	2.9	.3

c. ACCURATELY PERFORM THE FOUR BASIC OPERATIONS WITH DECIMAL FRACTIONS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Elem.)	1818	76.6%	21.3	2.1	2.7	.5
Grade 1	439	65.8%	30.8	3.4	2.6	.6
Grade 3	438	71.7%	26.0	2.3	2.7	.5
Grade 5	462	78.8%	18.8	2.4	2.8	.5
Grade 7	479	88.9%	10.6	0.4	2.9	.3
Total (Sec.)	743	97.2%	2.8	0.0	3.0	.2
Grade 8	380	98.2%	1.8	0.0	3.0	.1
Grade 10	274	96.7%	3.3	0.0	3.0	.2
Grade 12	89	94.4%	5.6	0.0	2.9	.2

PART II - LEARNING OUTCOMES

Q.14 *(Elementary)*
Q.16 *(Secondary)* - *Continued*

d. USE THE 'BASIC' FORMULAS FOR AREA AND VOLUME

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Elem.)	1812	47.9%	45.8	6.3	2.4	.6
Grade 1	438	38.8%	51.6	9.6	2.3	.6
Grade 3	437	51.5%	40.7	7.8	2.4	.6
Grade 5	457	50.8%	43.5	5.7	2.5	.6
Grade 7	480	50.2%	47.3	2.5	2.5	.5
Total (Sec.)	741	75.3%	22.0	2.7	2.7	.5
Grade 8	380	77.1%	21.3	1.6	2.8	.5
Grade 10	272	75.7%	20.6	3.7	2.7	.5
Grade 12	89	66.3%	29.2	4.5	2.6	.6

e. USE THE PYTHAGOREAN THEOREM

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Elem.)	1778	8.5%	48.4	43.0	1.7	.6
Grade 1	425	9.4%	45.6	44.9	1.6	.6
Grade 3	429	10.7%	46.9	42.4	1.7	.7
Grade 5	451	9.1%	50.6	40.4	1.7	.6
Grade 7	473	5.3%	50.3	44.4	1.6	.6
Total (Sec.)	741	39.1%	46.8	14.0	2.2	.7
Grade 8	380	38.9%	46.8	14.2	2.2	.7
Grade 10	273	38.8%	46.9	14.3	2.2	.7
Grade 12	88	40.9%	46.6	12.5	2.3	.7

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Q.14 *(Elementary)*
Q.16 *(Secondary)* - *Continued*

f. SOLVE LINEAR EQUATIONS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Elem.)	1780	29.3%	51.2	19.5	2.1	.7
Grade 1	430	24.9%	49.1	26.0	2.0	.7
Grade 3	422	30.1%	50.1	19.7	2.1	.7
Grade 5	455	29.9%	52.5	17.6	2.1	.7
Grade 7	473	31.9%	52.9	15.2	2.2	.7
Total (Sec.)	741	43.7%	45.3	10.9	2.3	.7
Grade 8	380	46.3%	43.9	9.7	2.4	.7
Grade 10	272	38.2%	48.9	12.9	2.3	.7
Grade 12	89	49.4%	40.4	10.1	2.4	.7

g. SOLVE QUADRATIC EQUATIONS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Elem.)	1752	10.3%	49.0	40.6	1.7	.6
Grade 1	421	9.5%	48.9	41.6	1.7	.6
Grade 3	416	12.0%	47.8	40.0	1.7	.7
Grade 5	446	10.8%	48.7	40.6	1.7	.7
Grade 7	469	9.2%	50.5	40.3	1.7	.6
Total (Sec.)	739	15.8%	49.4	34.8	1.8	.7
Grade 8	379	14.8%	49.3	35.9	1.8	.7
Grade 10	271	13.7%	53.1	32.2	1.8	.7
Grade 12	89	27.0%	38.2	34.8	1.9	.8

PART II - LEARNING OUTCOMES

Q.14 (*Elementary*)
Q.16 (*Secondary*) - *Continued*

h. USE THE METRIC UNITS OF MEASUREMENT

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Elem.)	1822	92.6%	7.2	0.2	2.9	.3
Grade 1	444	91.2%	8.6	0.2	2.9	.3
Grade 3	436	92.4%	7.6	0.0	2.9	.3
Grade 5	463	93.5%	6.3	0.2	2.9	.3
Grade 7	479	93.1%	6.5	0.4	2.9	.3
Total (Sec.)	737	88.9%	10.0	1.1	2.9	.4
Grade 8	376	92.6%	7.2	0.3	2.9	.3
Grade 10	272	86.8%	11.4	1.8	2.8	.4
Grade 12	89	79.8%	18.0	2.2	2.8	.5

i. EVALUATE A GIVEN ALGEBRAIC EXPRESSION

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Elem.)	1777	17.6%	56.7	25.7	1.9	.7
Grade 1	428	15.2%	53.0	31.8	1.8	.7
Grade 3	425	18.6%	54.1	27.3	1.9	.7
Grade 5	453	17.4%	57.6	24.9	1.9	.6
Grade 7	471	19.1%	61.6	19.3	2.0	.6
Total (Sec.)	733	39.4%	49.7	10.9	2.3	.7
Grade 8	376	42.6%	46.8	10.6	2.3	.7
Grade 10	268	34.0%	55.2	10.8	2.2	.6
Grade 12	89	42.7%	44.9	12.4	2.3	.7

B.C. Mathematics Assessment - Teacher Questionnaire

PART II - LEARNING OUTCOMES

Q.14 (*Elementary*)
Q.16 (*Secondary*) - *Continued*

j. RECOGNIZE AND NAME GEOMETRIC FIGURES

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Elem.)	1810	36.6%	54.6	8.7	2.3	.6
Grade 1	438	45.7%	45.7	8.7	2.4	.6
Grade 3	436	38.8%	55.0	6.2	2.3	.6
Grade 5	457	33.3%	59.7	7.0	2.3	.6
Grade 7	479	29.6%	57.6	12.7	2.2	.6
Total (Sec.)	739	47.9%	42.4	9.7	2.4	.7
Grade 8	378	48.4%	42.6	9.0	2.4	.6
Grade 10	272	49.6%	40.4	9.9	2.4	.7
Grade 12	89	40.4%	47.2	12.4	2.3	.7

k. APPLY MATHEMATICAL KNOWLEDGE TO PHYSICAL WORLD SITUATIONS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Elem.)	1810	75.4%	22.8	1.8	2.7	.5
Grade 1	435	72.9%	24.8	2.3	2.7	.5
Grade 3	434	79.5%	19.1	1.4	2.8	.4
Grade 5	462	72.9%	25.1	1.9	2.7	.5
Grade 7	479	76.4%	22.1	1.5	2.7	.5
Total (Sec.)	739	75.8%	23.0	1.2	2.7	.5
Grade 8	277	78.0%	21.2	0.8	2.8	.4
Grade 10	273	74.7%	23.8	1.5	2.7	.5
Grade 12	89	69.7%	28.1	2.2	2.7	.5

PART II - LEARNING OUTCOMES

Q.14 *(Elementary)*
Q.16 *(Secondary) - Continued*

p. APPLY MATHEMATICAL KNOWLEDGE TO CONSUMER RELATED SITUATIONS

Grade	N	Essential (3)	Important, but not Essential (2)	Optional (1)	MEAN	S.D.
Total (Elem.)	1818	89.5%	9.9	0.6	2.9	.3
Grade 1	440	88.2%	10.9	0.9	2.9	.4
Grade 3	436	92.9%	6.7	0.5	2.9	.3
Grade 5	462	87.9%	11.5	0.6	2.9	.4
Grade 7	480	89.2%	10.4	0.4	2.9	.3
Total (Sec.)	741	87.3%	12.3	0.4	2.9	.3
Grade 8	380	90.5%	9.2	0.3	2.9	.3
Grade 10	272	84.6%	15.4	0.0	2.9	.4
Grade 12	89	82.0%	15.7	2.2	2.8	.5

Q.15 *(Elementary)* *Do you feel students should be required to take a mathematics course*
Q.17 *(Secondary)* *(academic or non-academic) in:*

Grade	N	Grade 8? Yes	Grade 9? Yes	Grade 10? Yes	Grade 11? Yes	Grade 12? Yes
Total (Elem.)	1820	99.8%	99.4	97.6	84.3	73.1
Grade 1	444	100.0%	99.5	99.1	87.1	76.1
Grade 3	442	99.8%	99.1	96.8	84.2	73.2
Grade 5	457	99.6%	99.1	97.1	83.3	71.3
Grade 7	477	100.0%	99.8	97.3	82.7	71.9
Total (Sec.)	743	99.6%	98.8	96.2	77.9	47.5
Grade 8	382	99.5%	99.7	97.6	79.0	54.3
Grade 10	272	99.6%	97.4	94.9	80.3	43.7
Grade 12	89	100.0%	98.9	94.4	65.9	31.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART III - CLASSROOM ORGANIZATION

Q.16 (*Elementary*) *How many students do you have at present in your mathematics class?*

Grade	N	MEAN	S.D.
Total (Elem.)	1974	25.0	7.7
Grade 1	499	22.7	6.2
Grade 3	488	23.9	7.9
Grade 5	511	25.8	6.9
Grade 7	476	27.9	8.6

Q.18 (*Secondary*) *On the average, how many students do you currently have in the mathematics class(es) at the grade/year level specified earlier?*

Grade	N	MEAN	S.D.
Total (Sec.)	736	29.3	13.5
Grade 8	378	30.6	14.5
Grade 10	270	28.5	12.3
Grade 12	88	26.4	12.0

Q.17 (*Elementary*)
Q.19 (*Secondary*) *On the average, how much time do you spend* *each day* *teaching mathematics? (in minutes)*

Grade	N	MEAN	S.D.
Total (Elem.)	1974	51.3	31.4
Grade 1	499	41.8	13.9
Grade 3	489	49.1	18.0
Grade 5	511	54.8	44.3
Grade 7	475	59.9	35.8
Total (Sec.)	735	175.6	93.0
Grade 8	374	162.9	94.0
Grade 10	273	186.3	93.9
Grade 12	88	196.2	78.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART III - CLASSROOM ORGANIZATION

Q.20 *(Secondary)* *On the average, how much time do you spend* ***each day*** *teaching non-mathematics courses? (in minutes)*

Grade	N	MEAN	S.D.
Total (Sec.)	702	73.4	88.6
Grade 8	364	96.2	95.0
Grade 10	260	52.3	77.3
Grade 12	78	37.6	60.0

Q.19 *(Elementary)* *On the average, how much time do you spend* ***each day*** *on mathematics lesson preparation and marking? (in minutes)*

Grade	N	MEAN	S.D.
Total (Elem.)	1934	37.9	37.2
Grade 1	485	38.4	58.1
Grade 3	481	42.1	29.9
Grade 5	501	37.2	24.5
Grade 7	467	33.9	25.0

Q.21 *(Secondary)* *On the average, how much time do you spend* ***each day*** *on mathematics lesson preparation? (in minutes)*

Grade	N	MEAN	S.D.
Total (Sec.)	736	52.8	44.6
Grade 8	375	51.5	52.2
Grade 10	272	54.5	35.9
Grade 12	89	53.4	32.7

Q.23 *(Secondary)* *On the average, how much time do you spend* ***each day*** *grading mathematics assignments? (in minutes)*

Grade	N	MEAN	S.D.
Total (Sec.)	730	37.4	30.5
Grade 8	374	35.1	26.1
Grade 10	269	40.0	37.1
Grade 12	87	39.3	24.9

B.C. Mathematics Assessment - Teacher Questionnaire

PART III - CLASSROOM ORGANIZATION

Q.18 (*Elementary*) *On the average, on how many days a week do you teach mathematics?*
Q.22 (*Secondary*)

Grade	N	One	Two	Three	Four	Five	MEAN	S.D.
Total (Elem.)	1970	0.2%	0.2	0.7	7.9	91.1	4.9	.4
Grade 1	496	0.0%	0.0	0.8	6.7	92.5	4.9	.4
Grade 3	488	0.2%	0.2	0.6	7.6	91.4	4.9	.4
Grade 5	512	0.4%	0.4	0.2	8.4	90.6	4.9	.4
Grade 7	474	0.0%	0.0	1.1	9.1	89.9	4.9	.3
Total (Sec.)	738	0.3%	0.4	4.6	6.0	88.0	4.8	.5
Grade 8	376	0.3%	0.3	5.9	6.6	87.0	4.8	.6
Grade 10	274	0.4%	0.4	3.6	5.1	90.5	4.9	.5
Grade 12	86	0.0%	1.1	2.3	5.7	90.9	4.9	.5

Q.20 (*Elementary*) *Which of the following describe(s) your teaching situation?*
Q.24 (*Secondary*)

Grade	N	Self-Contained Classroom	Team Teaching	Open Area*	Shared Workload**	Other
Total (Elem.)	2024	82.9%	4.9	6.3	9.2	6.0
Grade 1	507	86.4%	7.3	7.7	2.6	3.4
Grade 3	501	83.8%	5.4	8.4	5.0	7.0
Grade 5	524	83.2%	3.8	5.5	8.6	6.7
Grade 7	492	77.8%	3.3	3.7	20.9	6.9
Total (Sec.)	747	96.9%	1.1	0.4		2.9
Grade 8	383	96.1%	0.8	0.3	Not Asked	4.7
Grade 10	275	97.5%	1.8	0.7		1.5
Grade 12	89	98.9%	0.0	0.0		0.0

* *Two or more classes.*
** *One teacher takes all the mathematics, another takes all the language arts, etc.*

B.C. Mathematics Assessment - Teacher Questionnaire

PART III - CLASSROOM ORGANIZATION

Q.21 (*Elementary*) *Which of the following describe(s) the way in which your students*
Q.25 (*Secondary*) *are organized for mathematics instruction?*

Grade	N	Ability Groups	Individualized Instruction	Partially Individualized Instruction	Total Class Instruction	Other
Total (Elem.)	2024	54.7%	25.2	52.2	49.5	4.6
Grade 1	507	57.0%	27.6	51.1	53.8	5.5
Grade 3	501	56.7%	30.7	53.3	52.8	4.2
Grade 5	524	51.3%	22.5	50.2	43.7	5.0
Grade 7	492	53.9%	20.1	54.5	47.6	3.7
Total (Sec.)	747	30.9%	13.8	39.6	70.3	3.1
Grade 8	383	32.9%	12.5	41.3	66.8	2.3
Grade 10	275	32.4%	17.5	40.4	69.5	3.6
Grade 12	89	18.0%	7.9	30.3	87.6	4.5

Q.22 (*Elementary*) *Generally speaking, how frequently during their mathematics instruction*
Q.26 (*Secondary*) *time do your students engage in each of the following activities?*

a. ORAL WORK

Grade	N	Very Frequently (5)	Frequently (4)	Sometimes (3)	Rarely (2)	Never (1)	MEAN	S.D.
Total (Elem.)	1989	31.5%	49.2	17.2	2.0	0.1	4.1	.7
Grade 1	504	50.6%	41.5	6.9	1.0	0.0	4.4	.7
Grade 3	495	37.2%	48.7	13.5	0.6	0.0	4.2	.7
Grade 5	509	21.6%	55.0	20.6	2.8	0.0	4.0	.7
Grade 7	481	16.2%	51.6	28.3	3.7	0.2	3.8	.8
Total (Sec.)	737	11.1%	45.0	37.3	6.4	0.1	3.6	.8
Grade 8	377	10.3%	47.7	35.5	6.1	0.3	3.6	.8
Grade 10	273	10.6%	41.8	40.3	7.3	0.0	3.6	.8
Grade 12	87	16.1%	43.7	35.6	4.6	0.0	3.7	.8

PART III - CLASSROOM ORGANIZATION

Q.22 (*Elementary*)
Q.26 (*Secondary*) - *Continued*

b. INDIVIDUAL WORK

Grade	N	Very Frequently (5)	Frequently (4)	Sometimes (3)	Rarely (2)	Never (1)	MEAN	S.D.
Total (Elem.)	1973	48.3%	33.1	16.0	2.5	0.2	4.3	.8
Grade 1	501	51.3%	33.9	13.6	1.0	0.2	4.4	.8
Grade 3	[illegible]	51.0%	30.4	15.7	2.4	0.4	4.3	.8
Grade 5	507	48.5%	29.4	18.5	3.6	0.0	4.2	.9
Grade 7	475	41.9%	38.9	16.2	2.9	0.0	4.2	.8
Total (Sec.)	736	43.8%	38.2	12.6	5.0	0.4	4.2	.8
Grade 8	378	46.3%	35.4	12.7	5.3	0.3	4.2	.9
Grade 10	272	42.6%	39.7	13.7	4.0	0.4	4.2	.8
Grade 12	86	36.0%	45.3	10.5	7.0	1.2	4.1	.9

c. SMALL GROUP WORK

Grade	N	Very Frequently (5)	Frequently (4)	Sometimes (3)	Rarely (2)	Never (1)	MEAN	S.D.
Total (Elem.)	1939	13.5%	31.5	40.3	13.1	1.6	3.4	.9
Grade 1	492	19.5%	36.6	36.6	6.5	0.8	3.7	.9
Grade 3	484	15.5%	34.9	39.3	9.5	0.8	3.5	.9
Grade 5	495	9.5%	28.9	43.0	16.4	2.2	3.3	.9
Grade 7	468	9.4%	25.2	42.5	20.3	2.6	3.2	.9
Total (Sec.)	722	3.6%	15.4	37.5	37.5	10.2	2.7	1.0
Grade 8	371	3.0%	16.7	34.8	34.2	11.3	2.7	1.0
Grade 10	266	4.9%	14.7	41.4	41.4	9.0	2.8	1.0
Grade 12	85	2.4%	11.8	37.6	37.6	9.4	2.6	.9

B.C. Mathematics Assessment - Teacher Questionnaire

PART III - CLASSROOM ORGANIZATION

Q.22 (*Elementary*)
Q.26 (*Secondary*) - *Continued*

d. SOLVING TEXTBOOK EXERCISES

Grade	N	Very Frequently (5)	Frequently (4)	Sometimes (3)	Rarely (2)	Never (1)	MEAN	S.D.
Total (Elem.)	1979	34.9%	40.5	17.2	5.4	2.0	4.0	1.0
Grade 1	497	19.3%	35.2	27.8	10.7	7.0	3.5	1.1
Grade 3	493	31.8%	37.1	23.3	6.9	0.8	3.9	.9
Grade 5	510	44.1%	42.9	10.4	2.1	0.2	4.3	.8
Grade 7	479	44.3%	47.0	7.1	1.7	0.0	4.3	.7
Total (Sec.)	742	43.1%	43.7	9.7	2.4	1.1	4.3	.8
Grade 8	379	38.5%	44.1	12.7	3.2	1.6	4.1	.9
Grade 10	274	45.3%	45.6	6.2	2.2	0.7	4.3	.8
Grade 12	89	56.2%	36.0	7.9	0.0	0.0	4.5	.6

e. WORKING ON CREATIVE MATHEMATICS PROJECTS

Grade	N	Very Frequently (5)	Frequently (4)	Sometimes (3)	Rarely (2)	Never (1)	MEAN	S.D.
Total (Elem.)	1971	2.2%	11.2	52.8	29.8	4.0	2.8	.8
Grade 1	496	4.4%	16.7	54.0	21.6	3.2	3.0	.8
Grade 3	490	2.7%	12.7	54.7	28.4	1.6	2.9	.8
Grade 5	510	0.8%	9.0	50.4	33.9	5.9	2.6	.8
Grade 7	475	0.8%	6.3	52.0	35.6	5.3	2.6	.7
Total (Sec.)	735	0.4%	3.9	31.3	49.0	15.2	2.3	.8
Grade 8	379	0.3%	3.4	33.2	47.2	15.8	2.3	.8
Grade 10	268	0.7%	5.2	32.1	48.1	13.8	2.3	.8
Grade 12	88	0.0%	2.3	20.5	59.1	18.2	2.1	.7

B.C. Mathematics Assessment - Teacher Questionnaire

PART III - CLASSROOM ORGANIZATION

Q.22 (*Elementary*)
Q.26 (*Secondary*) - *Continued*

f. TEACHER EXPLANATION/DEMONSTRATION

Grade	N	Very Frequently (5)	Frequently (4)	Sometimes (3)	Rarely (2)	Never (1)	MEAN	S.D.
Total (Elem.)	1973	32.3%	50.5	15.3	1.8	0.2	4.1	.7
Grade 1	495	20.7%	44.6	22.0	4.2	0.4	4.0	.8
Grade 3	491	31.8%	51.7	15.3	1.0	0.2	4.1	.7
Grade 5	509	35.2%	52.7	11.0	1.2	0.0	4.2	.7
Grade 7	478	33.5%	52.9	12.8	0.8	0.0	4.2	.7
Total (Sec.)	740	36.9%	50.4	11.5	1.2	0.0	4.2	.7
Grade 8	378	34.7%	53.2	11.4	0.8	0.0	4.2	.7
Grade 10	273	35.9%	49.[illegible]	12.8	1.5	0.0	4.2	.7
Grade 12	89	49.4%	40.4	7.9	2.2	0.0	4.4	.7

g. WORKING AT ACTIVITY CENTRES

Grade	N	Very Frequently (5)	Frequently (4)	Sometimes (3)	Rarely (2)	Never (1)	MEAN	S.D.
Total (Elem.)	1948	5.0%	12.7	37.5	31.0	13.9	2.6	1.0
Grade 1	496	11.3%	25.6	41.9	17.1	4.0	3.2	1.0
Grade 3	485	6.6%	16.7	44.9	25.8	6.0	2.9	1.0
Grade 5	497	1.8%	4.0	36.0	37.6	20.5	2.3	.9
Grade 7	470	0.0%	4.0	26.6	43.8	25.5	2.1	.8
Total (Sec.)	730	0.0%	0.5	7.5	32.7	59.2	1.5	.7
Grade 8	374	0.0%	0.8	6.4	34.2	58.6	1.5	.7
Grade 10	268	0.0%	0.4	10.1	30.6	59.0	1.5	.7
Grade 12	88	0.0%	0.0	4.5	33.0	62.5	1.4	.6

B.C. Mathematics Assessment - Teacher Questionnaire

PART III - CLASSROOM ORGANIZATION

Q.22 *(Elementary)*
Q.26 *(Secondary)* - *Continued*

h. DRILL ON BASIC NUMBER FACTS (ELEM.)/DRILL ON ARITHMETIC COMPUTATION (SEC.)

Grade	N	Very Frequently (5)	Frequently (4)	Sometimes (3)	Rarely (2)	Never (1)	MEAN	S.D.
Total (Elem.)	1979	40.3%	37.5	17.9	3.4	0.9	4.1	.9
Grade 1	500	43.8%	40.8	12.8	2.0	0.6	4.2	.8
Grade 3	494	55.9%	35.2	8.7	0.0	0.2	4.5	.7
Grade 5	509	38.9%	39.7	18.7	2.0	0.8	4.1	.8
Grade 7	476	22.1%	34.0	31.9	9.9	2.1	3.6	1.0
Total (Sec.)	740	10.8%	27.0	36.4	18.0	7.8	3.2	1.1
Grade 8	379	16.9%	33.2	39.1	8.2	2.6	3.5	1.0
Grade 10	272	5.5%	23.5	38.2	26.5	6.3	3.0	1.0
Grade 12	89	1.1%	11.2	19.1	33.7	34.8	2.1	1.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.23 (*Elementary*) Q.27 (*Secondary*) *Please rank the following five content areas of mathematics with respect to the amount of time you spend on each in your mathematics class during the school year:*

a. (ELEM.) DRILL ON BASIC NUMBER FACTS

Grade	N	Most time spent (5)	(4)	(3)	(2)	Least time spent (1)	MEAN	S.D.
Total (Elem.)	1981	28.7%	35.5	23.9	6.3	5.5	3.8	1.0
Grade 1	502	45.4%	34.1	14.5	2.8	3.2	4.2	1.0
Grade 3	494	37.9%	41.3	18.4	2.0	0.4	4.1	.8
Grade 5	510	20.0%	39.6	30.2	6.3	3.9	3.7	1.0
Grade 7	475	10.9%	26.7	32.8	14.5	14.9	3.0	1.2

a. (SEC.) DRILL ON ARITHMETIC COMPUTATION

Grade	N	Most time spent (5)	(4)	(3)	(2)	Least time spent (1)	MEAN	S.D.
Total (Sec.)	738	18.7%	19.5	23.2	19.9	18.7	3.0	1.4
Grade 8	377	31.3%	26.8	23.6	12.2	6.1	3.6	1.2
Grade 10	273	6.6%	14.7	24.2	27.8	26.7	2.5	1.2
Grade 12	88	2.3%	3.4	18.2	28.4	47.7	1.8	1.0

b. (ELEM.) COMPUTATION

Grade	N	Most time spent (5)	(4)	(3)	(2)	Least time spent (1)	MEAN	S.D.
Total (Elem.)	1984	62.0%	31.2	5.3	0.8	0.7	4.5	.7
Grade 1	500	52.8%	37.0	7.4	0.8	2.0	4.4	.8
Grade 3	495	64.0%	30.5	5.1	0.4	0.0	4.6	.6
Grade 5	513	68.8%	27.3	3.3	0.2	0.4	4.6	.6
Grade 7	476	62.4%	30.0	5.5	1.7	0.4	4.5	.7

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.23 (*Elementary*)
Q.27 (*Secondary*) - *Continued*

c. (ELEM.) AND b. (SEC.) PROBLEM SOLVING AND APPLICATIONS

Grade	N	Most time spent (5)	(4)	(3)	(2)	Least time spent (1)	MEAN	S.D.
Total (Elem.)	1984	14.0%	35.8	41.3	6.1	2.7	3.5	.9
Grade 1	502	13.5%	21.3	47.4	10.2	7.6	3.2	1.1
Grade 3	495	13.1%	33.5	47.3	5.1	1.0	3.5	.8
Grade 5	513	11.7%	39.8	40.9	6.6	1.0	3.5	.8
Grade 7	474	17.7%	49.4	29.1	2.5	1.3	3.8	.8
Total (Sec.)	732	21.2%	46.3	22.5	8.7	1.2	3.8	.9
Grade 8	374	19.5%	37.4	28.3	12.3	2.4	3.6	1.0
Grade 10	271	22.1%	55.0	16.6	6.3	0.0	3.9	.8
Grade 12	87	25.3%	57.5	16.1	1.1	0.0	4.1	.7

d. (ELEM.) AND c. (SEC.) GEOMETRY

Grade	N	Most time spent (5)	(4)	(3)	(2)	Least time spent (1)	MEAN	S.D.
Total (Elem.)	1977	0.4%	3.2	21.9	33.3	41.3	1.9	.9
Grade 1	499	0.4%	3.0	19.8	38.7	38.1	1.9	.8
Grade 3	494	0.0%	2.6	16.8	31.4	49.2	1.7	.8
Grade 5	509	0.2%	1.8	18.3	30.5	49.3	1.7	.8
Grade 7	475	0.8%	5.5	33.3	32.6	27.8	2.2	.9
Total (Sec.)	733	3.0%	10.8	38.5	31.4	16.4	2.5	1.0
Grade 8	377	1.3%	8.8	38.5	31.6	19.9	2.4	.9
Grade 10	270	5.9%	14.1	35.9	32.2	11.9	2.7	1.0
Grade 12	86	1.2%	9.3	46.5	27.9	15.1	2.5	.9

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.23 (*Elementary*)
Q.27 (*Secondary*) - *Continued*

e. (ELEM.) AND d. (SEC.) METRIC MEASUREMENT

Grade	N	Most time spent (5)	(4)	(3)	(2)	Least time spent (1)	MEAN	S.D.
Total (Elem.)	1975	1.6%	9.5	30.2	44.1	14.6	2.4	.9
Grade 1	499	1.0%	8.6	27.3	41.9	21.2	2.3	.9
Grade 3	492	1.4%	7.7	29.1	51.6	10.2	2.4	.8
Grade 5	509	2.0%	9.6	30.1	46.6	11.8	2.4	.9
Grade 7	475	1.9%	12.2	34.5	36.0	15.4	2.5	1.0
Total (Sec.)	737	1.6%	8.0	24.0	36.4	30.0	2.1	1.0
Grade 8	380	1.6%	9.2	28.9	32.6	27.6	2.2	1.0
Grade 10	270	1.9%	8.1	21.5	39.3	29.3	2.1	1.0
Grade 12	87	1.1%	2.3	10.3	43.7	42.5	1.8	.8

e. (SEC.) ALGEBRAIC CONCEPTS

Grade	N	Most time spent (5)	(4)	(3)	(2)	Least time spent (1)	MEAN	S.D.
Total (Sec.)	739	46.1%	25.8	16.2	6.6	5.1	4.0	1.2
Grade 8	379	28.0%	33.0	22.7	9.5	6.9	3.7	1.2
Grade 10	272	58.8%	19.9	12.1	4.8	4.4	4.2	1.1
Grade 12	88	85.2%	13.6	1.1	0.0	0.0	4.8	.4

Q.24 (*Elementary*) *Which of the following best describes your use of units of measurement in your classes other than mathematics class?*

Grade	N	Use metric units only	Use both metric and British units	Use British units only	I teach only mathematics classes
Total (Elem.)	1963	49.1%	47.3	1.4	2.1
Grade 1	486	65.8%	30.5	1.4	2.3
Grade 3	487	52.8%	44.8	1.4	1.0
Grade 5	511	45.0%	51.1	2.0	2.0
Grade 7	479	32.8%	63.0	0.8	3.3

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B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.28 (Secondary) *Which of the following best describes your use of units of measurement in your classes?*

Grade	N	Use metric units only	Use both metric and British units	Use British units only
Total (Sec.)	741	39.8%	59.1	1.1
Grade 8	379	48.0%	50.9	1.1
Grade 10	274	36.9%	62.0	1.1
Grade 12	88	13.6%	85.2	1.1

Q.25 (Elementary) *Please rate the following resources with respect to their usefulness*
Q.29 (Secondary) *in your planning of day-to-day lessons or units in mathematics:*

a. LAST YEAR'S PREPARATION

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1908	25.7%	22.0	24.8	13.3	14.3	3.3	1.4
Grade 1	487	24.4%	25.9	27.7	9.7	12.3	3.4	1.3
Grade 3	473	24.7%	20.7	22.2	17.8	14.6	3.2	1.4
Grade 5	486	23.0%	21.0	25.3	14.4	16.3	3.2	1.4
Grade 7	462	31.0%	20.1	23.8	11.3	13.9	3.4	1.4
Total (Sec.)	717	32.1%	24.0	19.9	10.5	13.5	3.5	1.4
Grade 8	358	29.1%	20.9	22.6	9.5	17.9	3.3	1.4
Grade 10	270	31.9%	27.4	18.1	11.5	11.1	3.6	1.3
Grade 12	89	44.9%	25.8	14.6	11.2	3.4	4.0	1.2

b. B.C. MATHEMATICS CURRICULUM GUIDE

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1928	10.1%	18.8	32.9	25.8	12.4	2.9	1.2
Grade 1	486	10.9%	19.3	35.2	25.7	8.8	3.0	1.1
Grade 3	481	15.2%	21.8	30.6	19.8	12.7	3.1	1.2
Grade 5	493	7.5%	16.6	31.0	29.8	15.0	2.7	1.1
Grade 7	468	6.8%	17.3	34.8	27.8	13.2	2.8	1.1
Total (Sec.)	712	11.7%	20.8	32.2	21.5	13.9	2.9	1.2
Grade 8	361	9.4%	20.5	30.2	24.1	15.8	2.8	1.2
Grade 10	263	12.5%	22.4	34.2	19.8	11.0	3.1	1.2
Grade 12	88	18.2%	17.0	34.1	15.9	14.8	3.1	1.3

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.25 (*Elementary*)
Q.29 (*Secondary*) - *Continued*

c. B.C.T.F. LESSON AIDS

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1831	1.7%	8.5	27.3	37.5	25.1	2.2	1.0
Grade 1	458	1.7%	8.1	29.3	37.3	23.6	2.3	1.0
Grade 3	463	2.6%	11.9	28.3	33.7	23.5	2.4	1.0
Grade 5	470	1.9%	7.4	24.5	38.7	27.4	2.2	1.0
Grade 7	440	0.7%	6.4	27.0	40.2	25.7	2.2	.9
Total (Sec.)	680	0.7%	1.8	15.6	35.7	46.2	1.8	.8
Grade 8	342	0.9%	2.3	17.3	35.7	43.9	1.8	.9
Grade 10	254	0.8%	1.6	15.4	37.4	44.9	1.8	.8
Grade 12	84	0.0%	0.0	9.5	31.0	59.5	1.5	.7

e. (ELEM.) AND h. (SEC.) IDEAS FROM IN-SERVICE ACTIVITIES

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1899	16.7%	31.4	31.4	14.6	5.8	3.4	1.1
Grade 1	493	30.4%	32.9	26.0	7.9	2.8	3.8	1.0
Grade 3	476	18.7%	34.9	29.0	12.4	5.0	3.5	1.1
Grade 5	479	9.0%	28.2	34.9	19.2	8.8	3.1	1.1
Grade 7	451	8.0%	29.5	36.4	19.3	6.9	3.1	1.0
Total (Sec.)	706	4.5%	15.0	35.0	28.9	16.6	2.6	1.1
Grade 8	353	5.7%	15.0	33.1	27.8	18.4	2.6	1.1
Grade 10	264	3.8%	14.8	36.4	29.5	15.5	2.6	1.0
Grade 12	89	2.2%	15.7	38.2	31.5	12.4	2.6	1.0

PART IV - CLASSROOM INSTRUCTION

Q.25 (*Elementary*)
Q.29 (*Secondary*) - *Continued*

g. (ELEM.) AND i. (SEC.) IDEAS FROM UNIVERSITY COURSES

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1853	6.0%	13.5	27.1	28.4	25.0	2.5	1.2
Grade 1	464	7.5%	10.1	30.0	29.3	23.1	2.5	1.2
Grade 3	458	5.0%	14.4	27.1	27.5	26.0	2.4	1.2
Grade 5	483	5.0%	14.1	26.9	25.9	28.2	2.4	1.2
Grade 7	448	6.5%	15.4	24.6	31.0	22.5	2.5	1.2
Total (Sec.)	700	2.7%	14.0	26.1	31.6	25.6	2.4	1.1
Grade 8	347	2.3%	12.4	23.6	30.0	31.7	2.2	1.1
Grade 10	264	2.7%	14.8	26.5	35.2	20.8	2.4	1.1
Grade 12	89	4.5%	18.0	34.8	27.0	15.7	2.6	1.1

h. (ELEM.) AND j. (SEC.) MATERIALS FROM YOUR DISTRICT RESOURCE CENTRE

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1858	6.7%	13.3	32.0	28.6	19.4	2.6	1.1
Grade 1	462	8.9%	13.2	31.2	28.6	18.2	2.7	1.2
Grade 3	456	8.1%	14.3	32.7	26.5	18.4	2.7	1.2
Grade 5	486	6.0%	13.8	32.1	25.9	22.2	2.6	1.2
Grade 7	454	3.7%	12.1	32.2	33.5	18.5	2.5	1.0
Total (Sec.)	688	0.6%	3.5	17.9	36.0	42.0	1.8	.9
Grade 8	344	0.6%	4.7	18.0	37.2	39.5	1.9	.9
Grade 10	257	0.8%	3.1	19.1	32.7	44.4	1.8	.9
Grade 12	87	0.0%	0.0	13.8	41.4	44.8	1.7	.7

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.25 (*Elementary*)
Q.29 (*Secondary*) - *Continued*

i. (ELEM.) AND k. (SEC.) PROFESSIONAL JOURNALS; E.G. THE B.C. TEACHER, VECTOR, ETC.

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1862	2.9%	7.6	28.0	35.4	26.0	2.3	1.0
Grade 1	473	3.2%	8.0	30.1	37.6	20.7	2.4	1.0
Grade 3	463	5.0%	8.4	27.9	34.3	24.4	2.4	1.1
Grade 5	477	1.9%	7.1	27.7	31.0	32.3	2.2	1.0
Grade 7	449	1.6%	6.9	26.1	39.0	26.5	2.2	1.0
Total (Sec.)	696	3.7%	10.2	28.4	31.5	26.1	2.3	1.1
Grade 8	347	1.4%	9.2	26.8	28.8	33.7	2.2	1.0
Grade 10	261	6.1%	9.2	31.4	33.3	19.9	2.5	1.1
Grade 12	88	5.7%	17.0	26.1	36.4	14.8	2.6	1.1

j. (ELEM.) AND l. (SEC.) SCHOOL DISTRICT MATHEMATICS SPECIALISTS

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1702	3.2%	7.2	15.6	24.5	49.5	1.9	1.1
Grade 1	418	5.0%	7.7	14.4	25.4	47.6	2.0	1.2
Grade 3	419	3.1%	7.6	17.2	21.7	50.4	1.9	1.1
Grade 5	443	2.5%	7.7	15.8	25.7	48.3	1.9	1.1
Grade 7	422	2.1%	5.9	14.9	25.1	51.9	1.8	1.0
Total (Sec.)	675	1.6%	4.9	11.3	26.8	55.4	1.7	1.0
Grade 8	341	1.8%	5.9	13.2	28.2	51.0	1.8	1.0
Grade 10	246	2.0%	3.7	11.0	25.2	58.1	1.7	1.0
Grade 12	88	0.0%	4.5	4.5	26.1	64.8	1.5	.8

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.25 (*Elementary*)
Q.29 (*Secondary*) - *Continued*

k. (ELEM.) AND m. (SEC.) DISTRICT SUPERVISORS

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1770	2.4%	4.6	14.7	25.1	53.2	1.8	1.0
Grade 1	451	4.0%	6.0	18.2	24.4	47.5	1.9	1.1
Grade 3	436	3.7%	6.0	14.2	26.1	50.0	1.9	1.1
Grade 5	456	1.3%	4.6	12.1	22.6	59.2	1.7	1.0
Grade 7	427	0.7%	1.4	14.3	27.4	56.2	1.6	.8
Total (Sec.)	676	0.0%	1.0	4.6	21.6	72.8	1.3	.6
Grade 8	338	0.0%	1.8	5.3	23.4	69.5	1.4	.7
Grade 10	251	0.0%	0.4	4.8	21.1	73.7	1.3	.6
Grade 12	87	0.0%	0.0	1.1	16.1	82.8	1.2	.4

n. LOCALLY DEVELOPED CURRICULUM GUIDES

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1743	13.9%	16.3	24.5	16.1	29.3	2.7	1.4
Grade 1	435	13.1%	17.9	26.0	17.0	26.0	2.8	1.4
Grade 3	433	16.4%	17.3	23.6	15.7	27.0	2.8	1.4
Grade 5	443	13.5%	13.5	23.5	16.3	33.2	2.6	1.4
Grade 7	432	12.5%	16.4	25.0	15.3	30.8	2.6	1.4
Total (Sec.)	679	14.0%	15.9	18.9	15.2	36.1	2.6	1.5
Grade 8	341	15.8%	15.5	20.5	13.8	34.3	2.6	1.5
Grade 10	252	13.5%	19.0	16.7	15.9	34.9	2.6	1.5
Grade 12	86	8.1%	8.1	18.6	18.6	46.5	2.1	1.3

PART IV - CLASSROOM INSTRUCTION

Q.25 (*Elementary*)
Q.29 (*Secondary*) - *Continued*

c. MATERIALS OBTAINED THROUGH BROWSING IN TEACHER STORES OR OTHER COMMERCIAL ESTABLISHMENTS

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1921	12.2%	24.2	31.3	20.8	11.5	3.0	1.2
Grade 1	491	13.4%	24.0	33.4	20.8	8.4	3.1	1.1
Grade 3	475	16.2%	26.7	30.3	18.5	8.2	3.2	1.2
Grade 5	492	10.6%	25.0	30.3	20.5	13.6	3.0	1.2
Grade 7	463	8.4%	21.0	31.3	23.5	15.8	2.8	1.2
Total (Sec.)	705	7.0%	22.6	28.4	23.1	19.0	2.8	1.2
Grade 8	356	6.5%	26.1	27.5	20.5	19.4	2.8	1.2
Grade 10	262	7.3%	19.1	31.3	22.5	19.8	2.7	1.2
Grade 12	87	8.0%	18.4	23.0	35.6	14.9	2.7	1.2

d. (ELEM.) IDEA BOOKS E.G. CREATIVE MATHEMATICS, WORKJOBS, ETC.

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1873	16.9%	25.6	31.7	19.1	6.7	3.3	1.1
Grade 1	483	26.7%	28.2	28.4	12.8	3.9	3.6	1.1
Grade 3	461	18.4%	26.9	31.0	17.6	6.1	3.3	1.1
Grade 5	482	12.7%	22.4	35.3	21.2	8.5	3.1	1.1
Grade 7	447	9.4%	24.8	32.2	25.3	8.3	3.0	1.1

g. (SEC.) MATHEMATICS BOOKS WHICH ARE NOT TEXTBOOKS

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Sec.)	710	8.5%	20.7	28.6	26.3	15.9	2.8	1.2
Grade 8	358	7.3%	22.3	28.1	24.0	17.3	2.8	1.2
Grade 10	265	9.4%	19.2	28.3	28.7	14.3	2.8	1.2
Grade 12	87	10.3%	18.4	27.6	28.7	14.9	2.8	1.2

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.25 *(Elementary)*
Q.29 *(Secondary)* - *Continued*

l. (ELEM.) STUDENT'S MATHEMATICS TEXTBOOK

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1958	32.9%	36.0	21.3	6.3	3.5	3.9	1.0
Grade 1	494	23.3%	32.2	17.5	10.7	6.3	3.6	1.1
Grade 3	487	33.3%	35.3	19.3	6.8	3.7	3.9	1.1
Grade 5	502	38.0%	36.1	20.9	4.0	2.6	4.0	1.0
Grade 7	475	37.3%	40.4	27.5	3.6	1.3	4.1	.9

d. (SEC.) THE PROVINCIALLY ADOPTED TEXTBOOKS FOR THE STUDENTS

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Sec.)	731	35.4%	33.5	19.6	6.8	4.7	3.9	1.1
Grade 8	374	32.9%	31.3	21.1	9.4	5.3	3.8	1.2
Grade 10	268	34.0%	37.7	18.3	5.2	4.9	3.9	1.1
Grade 12	89	50.6%	30.3	16.9	1.1	1.1	4.3	.9

m. (ELEM.) TEACHERS' GUIDEBOOKS ACCOMPANYING THE DIFFERENT MATHEMATICS TEXTBOOKS

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1966	38.3%	30.6	18.3	8.2	4.6	3.9	1.1
Grade 1	498	41.0%	29.5	20.7	6.0	2.8	4.0	1.1
Grade 3	488	41.2%	28.5	17.0	9.4	3.9	3.9	1.1
Grade 5	508	42.7%	30.9	14.8	7.1	4.5	4.0	1.1
Grade 7	472	27.8%	33.5	21.0	10.4	7.4	3.6	1.2

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.25 (*Elementary*)
Q.29 (*Secondary*) - *Continued*

e. (SEC.) THE TEACHERS' GUIDEBOOK ACCOMPANYING THE PROVINCIALLY ADOPTED TEXTBOOKS

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Sec.)	692	9.1%	15.9	22.7	27.5	24.9	2.6	1.3
Grade 8	350	9.1%	15.3	21.7	28.0	26.0	2.5	1.3
Grade 10	255	9.0%	14.1	25.5	25.9	25.5	2.6	1.3
Grade 12	87	9.2%	24.1	18.4	29.9	18.4	2.8	1.3

f. (ELEM.) IDEAS FROM COLLEAGUES

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Elem.)	1940	15.5%	33.1	33.0	14.9	3.6	3.4	1.0
Grade 1	490	22.9%	34.3	29.7	10.2	2.8	3.6	1.0
Grade 3	476	18.1%	36.3	30.5	12.0	3.2	3.5	1.0
Grade 5	500	11.0%	28.6	35.8	19.8	4.0	3.2	1.0
Grade 7	466	8.8%	33.3	36.1	17.6	4.3	3.2	1.0

f. (SEC.) MATHEMATICS BOOKS WHICH ARE NOT PROVINCIALLY ADOPTED

Grade	N	Very Useful (5)	(4)	(3)	(2)	Not Useful (1)	MEAN	S.D.
Total (Sec.)	720	14.7%	27.9	34.0	14.2	9.2	3.2	1.1
Grade 8	363	11.6%	28.9	33.6	15.7	10.2	3.2	1.1
Grade 10	269	16.7%	29.7	33.1	11.9	8.6	3.3	1.1
Grade 12	88	21.6%	18.2	38.6	14.8	6.8	3.3	1.2

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.26 (*Elementary*) Q.31 (*Secondary*) *The following statements represent a number of factors purported to affect mathematics instruction. Please rate each factor with the priority you would give it based on the effect it has on the success of* ***your*** *mathematics program:*

a. REDUCTION OF CLASS SIZE

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1987	58.3%	19.6	13.7	3.9	4.5	4.2	1.1
Grade 1	502	59.8%	17.5	14.5	3.6	4.6	4.2	1.1
Grade 3	491	60.9%	17.9	12.8	4.7	3.7	4.3	1.1
Grade 5	515	57.5%	21.9	12.6	3.3	4.7	4.2	1.1
Grade 7	479	54.9%	21.1	15.0	4.0	5.0	4.2	1.1
Total (Sec.)	741	50.7%	23.3	16.6	5.1	4.2	4.1	1.1
Grade 8	379	56.7%	20.8	16.6	3.4	2.4	4.3	1.0
Grade 10	273	46.9%	24.9	16.5	6.6	5.1	4.0	1.2
Grade 12	89	37.1%	29.2	16.9	7.9	9.0	3.8	1.3

b. GREATER RELEASE TIME FOR LESSON PREPARATION

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1970	28.7%	26.9	26.4	11.8	6.3	3.6	1.2
Grade 1	494	31.2%	24.7	24.5	11.3	8.3	3.6	1.3
Grade 3	489	31.1%	28.6	25.2	10.2	4.9	3.7	1.2
Grade 5	511	28.6%	26.2	26.8	13.3	5.1	3.6	1.2
Grade 7	476	23.7%	27.9	29.2	12.2	6.9	3.5	1.2
Total (Sec.)	738	19.8%	23.0	33.1	14.6	9.5	3.3	1.2
Grade 8	376	19.7%	20.5	33.5	17.0	9.3	3.2	1.2
Grade 10	273	20.9%	26.0	33.3	11.7	8.1	3.4	1.2
Grade 12	89	16.9%	24.7	30.3	13.5	14.6	3.2	1.3

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.26 (*Elementary*)
Q.31 (*Secondary*) - *Continued*

c. MORE CLERICAL ASSISTANCE

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1965	7.5%	15.0	29.4	23.3	24.8	2.6	1.2
Grade 1	496	8.5%	13.3	28.6	21.6	28.0	2.5	1.3
Grade 3	488	8.0%	16.8	29.9	20.9	24.4	2.6	1.2
Grade 5	507	7.5%	16.4	29.2	23.9	23.1	2.6	1.2
Grade 7	474	6.1%	13.3	30.0	27.0	23.6	2.5	1.2
Total (Sec.)	735	8.6%	16.6	31.2	21.8	21.9	2.7	1.2
Grade 8	376	7.7%	17.0	30.3	22.3	22.6	2.6	1.2
Grade 10	272	10.3%	17.6	31.3	19.1	21.7	2.8	1.3
Grade 12	87	6.9%	11.5	34.5	27.6	19.5	2.6	1.1

d. BETTER LIBRARY SERVICES

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1945	3.3%	6.7	24.5	26.3	39.2	2.1	1.1
Grade 1	488	4.9%	6.1	24.2	25.4	39.3	2.1	1.1
Grade 3	477	2.3%	7.8	24.9	25.6	39.4	2.1	1.1
Grade 5	507	2.8%	6.3	24.5	25.6	40.8	2.0	1.1
Grade 7	473	3.2%	6.8	24.3	28.6	37.0	2.1	1.1
Total (Sec.)	733	4.1%	7.6	25.2	29.2	33.8	2.2	1.1
Grade 8	376	4.0%	6.1	25.8	29.5	34.6	2.2	1.1
Grade 10	269	4.1%	10.4	23.8	29.0	32.7	2.2	1.1
Grade 12	88	4.5%	5.7	27.3	28.4	34.1	2.2	1.1

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.26 *(Elementary)*
Q.31 *(Secondary)* - *Continued*

e. REDUCTION OF TOTAL PUPIL LOAD

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1929	39.4%	21.9	21.7	8.7	8.3	3.8	1.3
Grade 1	483	44.7%	18.2	19.9	8.3	8.9	3.8	1.3
Grade 3	476	43.5%	23.9	18.1	8.0	6.5	3.9	1.2
Grade 5	507	36.1%	21.9	24.3	9.3	8.5	3.7	1.3
Grade 7	463	33.3%	23.8	24.4	9.1	9.5	3.6	1.3
Total (Sec.)	731	33.2%	23.8	24.8	9.0	9.2	3.6	1.3
Grade 8	374	39.8%	18.7	23.5	10.2	7.8	3.7	1.3
Grade 10	268	26.9%	27.6	28.7	6.7	10.1	3.5	1.2
Grade 12	89	24.7%	33.7	18.0	11.2	12.4	3.5	1.3

f. IMPROVEMENT OF PHYSICAL FACILITIES

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1958	9.5%	16.4	28.7	21.8	23.6	2.7	1.3
Grade 1	494	10.7%	18.2	33.4	15.8	21.9	2.8	1.3
Grade 3	484	12.6%	19.0	26.7	21.7	20.0	2.8	1.3
Grade 5	504	7.5%	15.1	26.8	24.8	25.8	2.5	1.2
Grade 7	476	7.1%	13.2	27.7	25.0	26.9	2.5	1.2
Total (Sec.)	735	15.5%	21.9	27.1	17.3	17.7	3.0	1.3
Grade 8	376	17.3%	20.2	27.4	17.0	18.1	3.0	1.3
Grade 10	270	15.6%	25.2	28.1	15.6	15.6	3.1	1.3
Grade 12	89	7.9%	19.1	27.0	23.6	22.5	2.7	1.2

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.26 (*Elementary*)
Q.31 (*Secondary*) - *Continued*

g. TEXTBOOKS MORE SUITED TO INSTRUCTIONAL NEEDS

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1965	34.8%	25.6	21.6	10.2	7.8	3.7	1.3
Grade 1	494	25.3%	25.1	24.3	11.5	13.8	3.4	1.3
Grade 3	483	39.1%	25.1	21.3	8.7	5.8	3.8	1.2
Grade 5	511	36.8%	23.9	23.3	10.4	5.7	3.8	1.2
Grade 7	477	37.9%	28.5	17.2	10.1	6.3	3.8	1.2
Total (Sec.)	734	45.0%	25.1	21.1	6.4	2.5	4.0	1.1
Grade 8	376	46.0%	25.3	19.7	6.4	2.7	4.1	1.1
Grade 10	270	47.0%	25.6	20.4	4.8	2.2	4.1	1.0
Grade 12	88	34.1%	22.7	29.5	11.4	2.3	3.8	1.1

h. INCREASING TIME ALLOTMENT FOR MATHEMATICS

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1963	7.6%	16.8	34.6	20.6	20.3	2.7	1.2
Grade 1	496	4.6%	12.1	35.1	21.2	27.0	2.5	1.1
Grade 3	483	7.0%	17.2	34.2	21.9	19.7	2.7	1.2
Grade 5	509	10.2%	20.2	33.2	18.5	17.9	2.9	1.2
Grade 7	475	8.6%	17.7	36.2	21.1	16.4	2.8	1.2
Total (Sec.)	735	18.4%	17.1	31.7	16.1	16.7	3.0	1.3
Grade 8	375	13.6%	15.5	33.6	18.4	18.9	2.9	1.3
Grade 10	271	18.5%	16.6	33.9	15.1	15.9	3.1	1.3
Grade 12	89	38.2%	25.8	16.9	9.0	10.1	3.7	1.3

PART IV - CLASSROOM INSTRUCTION

Q.26 (*Elementary*)
Q.31 (*Secondary*) - *Continued*

i. MORE EFFECTIVE TEACHER EDUCATION PRE-SERVICE PROGRAMS

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1942	23.1%	26.6	30.5	12.7	7.1	3.5	1.2
Grade 1	493	24.9%	26.0	29.6	12.2	7.3	3.5	1.2
Grade 3	472	25.6%	28.4	28.6	12.5	4.9	3.6	1.1
Grade 5	508	22.8%	26.2	31.3	12.0	7.7	3.4	1.2
Grade 7	469	18.8%	26.0	32.6	14.1	8.5	3.3	1.2
Total (Sec.)	731	17.5%	22.4	33.9	16.4	9.7	3.2	1.2
Grade 8	374	19.0%	23.8	36.9	12.6	7.8	3.3	1.2
Grade 10	268	18.7%	21.3	28.9	19.4	10.8	3.2	1.2
Grade 12	89	7.9%	20.2	33.7	23.6	14.6	2.8	1.2

j. MORE EFFECTIVE IN-SERVICE AND PROFESSIONAL DEVELOPMENT

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1968	25.2%	31.3	28.0	9.9	5.7	3.6	1.1
Grade 1	498	26.5%	29.9	29.3	8.6	5.6	3.6	1.1
Grade 3	484	27.1%	33.9	25.6	9.1	4.3	3.7	1.1
Grade 5	508	25.0%	29.5	29.5	9.3	6.7	3.6	1.2
Grade 7	478	22.0%	32.0	27.4	12.6	6.1	3.5	1.1
Total (Sec.)	735	18.6%	30.2	30.6	13.9	6.7	3.4	1.1
Grade 8	375	19.5%	30.9	31.7	11.5	6.4	3.5	1.1
Grade 10	271	19.2%	30.3	29.5	15.1	5.9	3.4	1.1
Grade 12	89	13.5%	27.0	29.2	20.2	10.1	3.1	1.2

PART IV - CLASSROOM INSTRUCTION

Q.26 *(Elementary)*
Q.31 *(Secondary)* - *Continued*

k. MORE RELEASE TIME FOR IN-SERVICE AND PROFESSIONAL DEVELOPMENT

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1967	25.2%	27.7	25.9	13.6	7.2	3.5	1.2
Grade 1	498	28.3%	26.9	25.9	10.0	8.8	3.6	1.2
Grade 3	480	30.0%	30.2	22.3	12.7	4.8	3.7	1.2
Grade 5	511	21.9%	27.4	27.4	15.3	8.0	3.4	1.2
Grade 7	478	20.5%	26.2	27.8	16.3	9.2	3.3	1.2
Total (Sec.)	736	17.7%	23.1	33.2	17.1	9.0	3.2	1.2
Grade 8	376	19.1%	22.9	31.6	16.8	9.6	3.3	1.2
Grade 10	271	18.1%	22.1	36.5	16.2	7.0	3.3	1.1
Grade 12	89	10.1%	22.7	29.2	21.3	12.4	3.0	1.2

l. CURRICULUM GUIDES THAT OFFER MORE ASSISTANCE IN THE INSTRUCTIONAL PROCESS

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1974	27.1%	31.5	22.2	11.3	8.0	3.6	1.2
Grade 1	499	25.7%	31.1	25.7	10.2	7.4	3.6	1.2
Grade 3	488	30.1%	32.8	18.9	10.5	7.8	3.7	1.2
Grade 5	510	27.6%	28.8	21.4	13.5	8.6	3.5	1.3
Grade 7	477	24.9%	33.3	22.9	10.9	8.0	3.6	1.2
Total (Sec.)	733	22.2%	25.1	25.8	16.2	10.6	3.3	1.3
Grade 8	374	25.1%	24.6	25.1	15.8	9.4	3.4	1.3
Grade 10	270	21.9%	25.6	28.9	14.1	9.6	3.4	1.2
Grade 12	89	11.2%	25.8	19.1	24.7	10.1	2.9	1.3

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.26 *(Elementary)*
Q.31 *(Secondary)* - *Continued*

m. CURRICULUM GUIDES THAT OUTLINE CONTENT IN SPECIFIC TERMS

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1965	28.5%	30.0	24.1	10.8	6.6	3.6	1.2
Grade 1	497	25.6%	30.4	24.5	13.1	6.4	3.6	1.2
Grade 3	486	32.5%	27.8	24.1	9.9	5.8	3.7	1.2
Grade 5	506	30.6%	28.7	23.5	9.5	7.7	3.7	1.2
Grade 7	476	25.4%	33.4	24.2	10.7	6.3	3.6	1.2
Total (Sec.)	735	25.2%	24.5	29.1	13.2	8.0	3.5	1.2
Grade 8	377	26.3%	26.3	28.1	11.1	8.2	3.5	1.2
Grade 10	270	26.3%	22.6	32.2	13.0	5.9	3.5	1.2
Grade 12	88	17.0%	22.7	23.9	22.7	13.6	3.1	1.3

n. MORE LEARNING ASSISTANCE SERVICES

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1945	20.9%	22.8	29.9	16.2	10.1	3.3	1.2
Grade 1	492	19.5%	22.4	29.5	16.5	12.2	3.2	1.3
Grade 3	479	21.7%	24.0	31.3	15.7	7.3	3.4	1.2
Grade 5	500	23.8%	20.8	29.4	16.0	10.0	3.3	1.3
Grade 7	474	18.6%	24.1	29.5	16.9	11.0	3.2	1.2
Total (Sec.)	733	16.0%	19.1	32.1	21.0	11.9	3.1	1.2
Grade 8	374	20.6%	21.4	33.4	15.0	9.6	3.3	1.2
Grade 10	270	13.0%	18.1	32.2	25.2	11.5	3.0	1.2
Grade 12	89	5.6%	12.4	25.8	33.7	22.5	2.4	1.1

PART IV - CLASSROOM INSTRUCTION

Q.26 (*Elementary*)
Q.31 (*Secondary*) - *Continued*

o. MORE MATHEMATICS MANIPULATIVE MATERIALS FOR INDIVIDUAL CLASSROOMS

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1978	42.3%	27.1	19.5	8.0	3.1	4.0	1.1
Grade 1	503	58.1%	21.7	14.1	3.8	2.4	4.3	1.0
Grade 3	487	49.1%	26.9	16.0	5.5	2.5	4.1	1.0
Grade 5	510	34.3%	28.2	23.3	10.6	3.5	3.8	1.1
Grade 7	478	27.2%	32.0	24.7	12.1	4.0	3.7	1.1
Total (Sec.)	734	18.9%	26.0	30.1	17.0	7.9	3.3	1.2
Grade 8	375	22.4%	29.3	27.7	13.3	7.2	3.5	1.2
Grade 10	271	18.1%	22.9	33.6	19.2	6.3	3.3	1.2
Grade 12	88	6.8%	21.6	29.5	26.1	15.9	2.8	1.2

p. ABILITY GROUPING OF STUDENTS FOR CLASSES

Grade	N	High Priority (5)	(4)	(3)	(2)	Low Priority (1)	MEAN	S.D.
Total (Elem.)	1961	25.6%	24.2	24.7	12.7	12.7	3.4	1.3
Grade 1	493	20.3%	20.5	24.9	15.0	19.3	3.1	1.4
Grade 3	483	26.7%	23.0	26.3	10.8	13.3	3.4	1.3
Grade 5	509	26.7%	22.8	27.1	14.1	9.2	3.4	1.3
Grade 7	476	28.8%	30.9	20.4	10.9	9.0	3.6	1.3
Total (Sec.)	737	40.6%	28.6	17.9	6.8	6.1	3.9	1.2
Grade 8	378	43.9%	25.9	17.7	7.4	5.0	4.0	1.2
Grade 10	270	39.3%	31.9	17.0	5.9	5.9	3.9	1.2
Grade 12	121	30.3%	30.3	21.3	6.7	11.2	3.6	1.3

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.27 (*Elementary*) *Please circle the number which best indicates the frequency with which*
Q.30 (*Secondary*) *you use each of the following in your mathematics class:*

a. TELEVISION

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1979	0.3%	13.2	86.5	1.1	.4
Grade 1	503	0.0%	9.7	90.3	1.1	.3
Grade 3	489	0.0%	9.8	90.2	1.1	.3
Grade 5	509	0.6%	14.3	85.1	1.2	.4
Grade 7	478	0.4%	19.2	80.3	1.2	.4
Total (Sec.)	736	0.0%	5.4	94.6	1.1	.2
Grade 8	376	0.0%	4.0	96.0	1.0	.2
Grade 10	271	0.0%	7.0	93.0	1.1	.3
Grade 12	[illegible]	0.0%	6.7	93.3	1.1	.3

b. FILMS

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1979	1.7%	39.0	59.3	1.4	.5
Grade 1	501	1.2%	33.9	64.9	1.4	.5
Grade 3	490	2.9%	34.9	62.2	1.4	.5
Grade 5	510	2.0%	41.6	56.5	1.5	.5
Grade 7	478	0.8%	45.8	53.3	1.5	.5
Total (Sec.)	737	0.4%	28.0	71.6	1.3	.5
Grade 8	377	0.5%	26.3	73.2	1.3	.5
Grade 10	271	0.4%	31.0	68.6	1.3	.5
Grade 12	89	0.0%	25.8	74.2	1.3	.4

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.27 (*Elementary*)
Q.30 (*Secondary*) - *Continued*

c. FILMSTRIPS (OR LOOPS)

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1973	3.6%	43.6	52.8	1.5	.6
Grade 1	502	3.4%	43.6	53.0	1.5	.6
Grade 3	487	5.3%	40.2	54.4	1.5	.6
Grade 5	507	3.7%	42.6	53.6	1.5	.6
Grade 7	477	1.9%	48.0	50.1	1.5	.5
Total (Sec.)	736	0.7%	30.2	69.2	1.3	.5
Grade 8	376	0.5%	28.5	71.0	1.3	.5
Grade 10	271	0.7%	32.8	66.4	1.3	.5
Grade 12	89	1.1%	29.2	69.7	1.3	.5

d. OVERHEAD PROJECTOR

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1975	17.4%	39.3	43.3	1.7	.7
Grade 1	499	10.4%	32.9	56.7	1.5	.7
Grade 3	487	10.9%	33.5	55.6	1.6	.7
Grade 5	511	21.5%	42.7	35.8	1.9	.7
Grade 7	478	26.8%	48.5	24.7	2.0	.7
Total (Sec.)	737	25.9%	40.3	33.8	1.9	.7
Grade 8	376	20.5%	40.2	39.4	1.8	.8
Grade 10	273	31.1%	41.0	27.8	2.0	.8
Grade 12	88	33.0%	38.6	28.4	2.0	.8

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.27 (*Elementary*)
Q.30 (*Secondary*) - *Continued*

e. OPAQUE PROJECTOR

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1960	1.6%	20.7	77.7	1.2	.5
Grade 1	497	1.8%	17.3	80.9	1.2	.4
Grade 3	482	1.5%	18.3	80.3	1.2	.4
Grade 5	508	2.4%	22.6	75.0	1.3	.5
Grade 7	473	0.8%	24.5	74.6	1.3	.5
Total (Sec.)	721	0.4%	10.8	88.8	1.1	.3
Grade 8	368	0.8%	10.3	88.9	1.1	.3
Grade 10	266	0.0%	11.3	88.7	1.1	.3
Grade 12	87	0.0%	11.5	88.5	1.1	.3

f. CHALK BOARD

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1988	96.1%	3.2	0.8	3.0	.2
Grade 1	502	93.6%	5.6	0.8	2.9	.3
Grade 3	493	98.2%	1.4	0.4	3.0	.2
Grade 5	513	95.7%	2.9	1.4	2.9	.3
Grade 7	480	96.9%	2.7	0.4	3.0	.2
Total (Sec.)	741	95.1%	4.2	0.7	2.9	.3
Grade 8	379	95.8%	3.7	0.5	3.0	.2
Grade 10	273	94.5%	4.4	1.1	2.9	.3
Grade 12	89	94.4%	5.6	0.0	2.9	.2

PART IV - CLASSROOM INSTRUCTION

Q.27 (*Elementary*)
Q.30 (*Secondary*) - *Continued*

g. HAND-HELD CALCULATORS

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1980	3.3%	14.0	82.6	1.2	.5
Grade 1	502	2.2%	4.4	93.4	1.1	.4
Grade 3	490	1.6%	9.2	89.2	1.1	.4
Grade 5	511	2.5%	16.6	80.8	1.2	.5
Grade 7	477	7.1%	26.4	66.5	1.4	.6
Total (Sec.)	737	21.8%	42.2	36.0	1.9	.7
Grade 8	377	8.8%	41.6	49.6	1.6	.6
Grade 10	272	28.7%	46.0	25.4	2.0	.7
Grade 12	88	56.8%	33.0	10.2	2.5	.7

h. COMMERCIALLY PREPARED HANDOUTS

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1967	21.1%	52.8	26.1	2.0	.7
Grade 1	497	16.7%	52.5	30.8	1.9	.7
Grade 3	485	21.0%	55.7	23.3	2.0	.7
Grade 5	507	25.2%	52.1	22.7	2.0	.7
Grade 7	478	21.3%	51.0	27.6	1.9	.7
Total (Sec.)	735	12.7%	47.3	40.0	1.7	.7
Grade 8	377	16.4%	48.0	35.5	1.8	.7
Grade 10	269	10.8%	48.7	40.5	1.7	.7
Grade 12	89	2.2%	40.4	57.3	1.4	.5

PART IV - CLASSROOM INSTRUCTION

Q.27 (*Elementary*)
Q.30 (*Secondary*) - *Continued*

i. TEACHER-PREPARED HANDOUTS

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1984	80.0%	18.3	1.6	2.8	.4
Grade 1	503	81.7%	16.3	2.0	2.8	.4
Grade 3	491	83.1%	14.9	2.0	2.8	.4
Grade 5	511	78.5%	20.2	1.4	2.8	.5
Grade 7	479	76.8%	22.1	1.0	2.8	.5
Total (Sec.)	743	84.9%	13.9	1.2	2.8	.4
Grade 8	380	87.6%	11.6	0.8	2.9	.4
Grade 10	274	83.9%	14.6	1.5	2.8	.4
Grade 12	89	70.4%	21.3	2.2	2.7	.5

j. TEACHER-PREPARED GAMES

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1982	55.5%	37.8	6.7	2.5	.6
Grade 1	504	79.4%	19.4	1.2	2.8	.4
Grade 3	491	71.7%	25.9	2.4	2.7	.5
Grade 5	510	43.7%	47.6	8.6	2.4	.6
Grade 7	477	26.2%	59.1	14.7	2.1	.6
Total (Sec.)	734	19.1%	56.8	24.1	1.9	.7
Grade 8	375	24.5%	54.9	20.5	2.0	.7
Grade 10	272	16.2%	59.6	24.3	1.9	.6
Grade 12	87	4.6%	56.3	39.1	1.7	.6

PART IV - CLASSROOM INSTRUCTION

Q.27 (Elementary)
Q.30 (Secondary) - *Continued*

k. TEACHER-PREPARED WORK CARDS

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1977	49.7%	38.1	12.2	2.4	.7
Grade 1	499	70.9%	23.0	6.0	2.6	.6
Grade 3	491	63.3%	31.5	5.3	2.6	.6
Grade 5	510	37.5%	48.4	14.1	2.2	.7
Grade 7	477	26.6%	49.7	23.7	2.0	.7
Total (Sec.)	725	13.9%	34.9	51.2	1.6	.7
Grade 8	370	17.6%	34.1	48.4	1.7	.8
Grade 10	267	10.9%	37.5	51.7	1.6	.7
Grade 12	88	8.0%	30.7	61.4	1.5	.6

n. (ELEM.) AND l. (SEC.) METRIC EQUIPMENT

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1973	46.0%	49.7	4.4	2.4	.6
Grade 1	498	43.4%	52.2	4.4	2.4	.6
Grade 3	491	47.7%	48.3	4.1	2.4	.6
Grade 5	510	47.6%	47.5	4.9	2.4	.6
Grade 7	474	45.1%	50.8	4.0	2.4	.6
Total (Sec.)	735	15.6%	57.3	27.1	1.9	.6
Grade 8	377	18.6%	58.6	22.8	2.0	.6
Grade 10	271	14.4%	59.8	25.8	1.9	.6
Grade 12	87	6.9%	43.7	49.4	1.6	.6

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.27 *(Elementary)*
Q.30 *(Secondary)* - *Continued*

l. (ELEM.) BASE 10 BLOCKS

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1949	14.6%	22.1	63.3	1.5	.7
Grade 1	490	33.1%	22.7	44.3	1.9	.9
Grade 3	478	18.6%	24.7	56.7	1.6	.8
Grade 5	505	5.1%	25.7	69.1	1.4	.6
Grade 7	476	1.7%	14.9	83.4	1.2	.4

m. (ELEM.) CUISENAIRE RODS

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1962	10.0%	17.5	72.4	1.4	.7
Grade 1	496	23.8%	25.0	51.2	1.7	.8
Grade 3	487	11.7%	22.4	65.9	1.5	.7
Grade 5	506	3.2%	14.0	82.8	1.2	.5
Grade 7	473	1.2%	8.5	90.3	1.1	.4

n. (ELEM.) ATTRIBUTE BLOCKS

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1939	10.8%	31.3	57.9	1.5	.7
Grade 1	491	30.8%	44.6	24.6	2.1	.7
Grade 3	479	8.4%	36.1	55.5	1.5	.6
Grade 5	502	2.8%	25.3	71.9	1.3	.5
Grade 7	467	0.9%	18.8	80.3	1.2	.4

PART IV - CLASSROOM INSTRUCTION

Q.27 *(Elementary)*
Q.30 *(Secondary)* - *Continued*

p. ABACUS

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1956	9.6%	30.6	59.8	1.5	.7
Grade 1	495	24.8%	35.8	39.4	1.9	.8
Grade 3	483	8.1%	34.0	58.0	1.5	.6
Grade 5	505	3.2%	33.5	63.4	1.4	.6
Grade 7	473	1.9%	18.8	79.3	1.2	.5

q. (ELEM.) SOLID GEOMETRIC SHAPES

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1962	18.2%	59.3	22.5	2.0	.6
Grade 1	490	30.5%	55.6	13.9	2.2	.6
Grade 3	487	16.6%	60.4	23.0	1.9	.6
Grade 5	505	12.3%	60.4	27.3	1.8	.6
Grade 7	472	13.1%	61.0	25.8	1.9	.6

r. (ELEM.) DICE

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1965	22.6%	41.9	35.4	1.9	.8
Grade 1	495	40.8%	42.6	16.6	2.2	.7
Grade 3	490	31.2%	43.3	25.5	2.0	.8
Grade 5	505	11.5%	39.2	49.3	1.6	.7
Grade 7	475	6.7%	42.7	50.5	1.6	.6

PART IV - CLASSROOM INSTRUCTION

Q.27 (*Elementary*)
Q.30 (*Secondary*) - *Continued*

s. (ELEM.) PLAYING CARDS

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1865	17.6%	39.3	43.2	1.7	.7
Grade 1	470	28.7%	40.9	30.4	2.0	.8
Grade 3	473	25.8%	41.0	33.2	1.9	.8
Grade 5	486	9.7%	38.3	52.1	1.6	.7
Grade 7	456	5.9%	36.8	57.2	1.5	.6

m. (SEC.) COMPUTER

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Sec.)	736	3.1%	14.4	82.5	1.2	.5
Grade 8	378	3.4%	10.3	86.2	1.2	.5
Grade 10	270	1.5%	15.2	83.3	1.2	.4
Grade 12	88	6.8%	29.5	63.6	1.4	.6

n. (SEC.) SLIDE RULES

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Sec.)	720	1.9%	18.6	79.4	1.2	.5
Grade 8	367	0.5%	10.4	89.1	1.1	.3
Grade 10	266	0.4%	22.9	76.7	1.2	.4
Grade 12	87	12.6%	40.2	47.1	1.7	.7

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.27 *(Elementary)*
Q.30 *(Secondary)* - *Continued*

u. (ELEM.) AND p. (SEC.) LEARNING CENTRES

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1909	22.2%	45.9	31.9	1.9	.7
Grade 1	495	41.8%	42.6	15.6	2.3	.7
Grade 3	473	27.5%	49.7	22.8	2.0	.7
Grade 5	481	12.3%	48.2	39.5	1.7	.7
Grade 7	460	5.9%	43.3	50.9	1.6	.6
Total (Sec.)	712	2.1%	18.1	79.8	1.2	.5
Grade 8	360	1.9%	18.6	79.4	1.2	.5
Grade 10	264	1.5%	18.6	79.9	1.2	.4
Grade 12	88	4.5%	14.8	80.7	1.2	.5

v. (ELEM.) AND q. (SEC.) INDIVIDUALIZED INSTRUCTION

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1978	70.3%	27.4	2.3	2.7	.5
Grade 1	498	70.7%	27.1	2.2	2.7	.5
Grade 3	489	71.4%	26.6	2.0	2.7	.5
Grade 5	510	68.2%	28.6	3.1	2.6	.5
Grade 7	481	70.9%	27.2	1.9	2.7	.5
Total (Sec.)	730	55.6%	38.1	6.3	2.5	.6
Grade 8	374	57.0%	36.4	6.7	2.5	.6
Grade 10	269	56.1%	37.9	5.9	2.5	.6
Grade 12	87	48.3%	46.0	5.7	2.4	.6

PART IV - CLASSROOM INSTRUCTION

Q.27 (*Elementary*)
Q.30 (*Secondary*) - *Continued*

w. (ELEM.) AND r. (SEC.) LABORATORIES

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1855	1.4%	16.7	81.9	1.2	.4
Grade 1	471	2.1%	10.2	87.7	1.1	.4
Grade 3	457	0.7%	13.8	85.6	1.2	.4
Grade 5	471	1.2%	20.4	78.1	1.2	.5
Grade 7	456	1.3%	22.4	76.3	1.2	.5
Total (Sec.)	709	2.3%	21.0	76.7	1.3	.5
Grade 8	360	1.4%	20.8	77.8	1.2	.5
Grade 10	262	3.1%	22.1	74.8	1.3	.5
Grade 12	87	3.4%	18.4	78.2	1.3	.5

x. (ELEM.) AND s. (SEC.) TOTAL CLASS INSTRUCTION

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1974	75.4%	20.4	4.2	2.7	.5
Grade 1	497	73.4%	21.5	5.0	2.7	.6
Grade 3	489	75.7%	20.0	4.3	2.7	.5
Grade 5	508	75.4%	20.3	4.3	2.7	.5
Grade 7	480	77.3%	19.6	3.1	2.7	.5
Total (Sec.)	742	92.9%	6.5	0.7	2.9	.3
Grade 8	381	92.7%	6.3	1.0	2.9	.3
Grade 10	272	91.5%	8.1	0.4	2.9	.3
Grade 12	89	97.8%	2.2	0.0	3.0	.1

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.27 *(Elementary)*
Q.30 *(Secondary)* - *Continued*

y. (ELEM.) AND t. (SEC.) TEAM TEACHING

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1862	5.2%	8.1	86.7	1.2	.5
Grade 1	473	5.9%	8.5	85.6	1.2	.5
Grade 3	456	6.6%	5.7	87.7	1.2	.5
Grade 5	480	4.2%	9.4	86.5	1.2	.5
Grade 7	453	4.2%	8.6	87.2	1.2	.5
Total (Sec.)	712	0.7%	10.3	89.0	1.1	.3
Grade 8	364	0.3%	8.5	91.2	1.1	.3
Grade 10	262	1.5%	11.5	87.0	1.1	.4
Grade 12	86	0.0%	14.0	86.0	1.1	.3

z. (ELEM.) AND u. (SEC.) COMPUTER AIDED INSTRUCTION

Grade	N	Frequently (3)	Infrequently (2)	Not at all (1)	MEAN	S.D.
Total (Elem.)	1859	0.4%	4.0	95.5	1.0	.2
Grade 1	471	0.4%	1.7	97.9	1.0	.2
Grade 3	457	0.4%	3.1	96.5	1.0	.2
Grade 5	476	0.4%	4.8	94.7	1.1	.2
Grade 7	455	0.4%	6.6	93.0	1.1	.3
Total (Sec.)	716	1.1%	10.2	88.7	1.1	.4
Grade 8	363	0.8%	8.3	90.9	1.1	.3
Grade 10	266	1.1%	8.3	90.6	1.1	.3
Grade 12	87	2.3%	24.1	73.6	1.3	.5

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.28 (*Elementary*) *Do you use a hand-held calculator in your own work?*
Q.34 (*Secondary*)

Grade	N	Yes
Total (Elem.)	1962	36.8%
Grade 1	498	29.5%
Grade 3	489	25.4%
Grade 5	502	38.0%
Grade 7	473	55.0%
Total (Sec.)	734	75.9%
Grade 8	376	72.9%
Grade 10	271	79.0%
Grade 12	87	79.3%

Q.29 (*Elementary*) *At which of the following levels do you feel students should be allowed*
Q.35 (*Secondary*) *to use hand-held calculators in their mathematics classes?*

Grade	N	At no level	Primary	Intermediate	Junior Secondary	Senior Secondary
Total (Elem.)	1978	17.5%	7.8	22.8	39.9	63.1
Grade 1	499	20.1%	9.5	20.1	38.3	60.6
Grade 3	489	18.4%	9.6	18.2	39.3	62.7
Grade 5	510	19.5%	5.9	22.5	37.8	59.5
Grade 7	480	11.8%	6.1	30.5	44.3	70.1
Total (Sec.)	747	9.0%	5.4	10.4	45.6	83.9
Grade 8	383	11.2%	5.0	10.2	41.3	79.6
Grade 10	275	6.9%	5.8	10.9	53.8	88.0
Grade 12	89	5.6%	5.6	10.1	39.3	89.9

Q.30 (*Elementary*) (*AMONG THOSE WHO FEEL STUDENTS SHOULD BE ALLOWED TO USE HAND-HELD CALCULATORS*
Q.36 (*Secondary*) *IN THEIR MATHEMATICS CLASSES*)
In which of the following ways are students allowed to use hand-held calculators in your mathematics class?

	Total (Elem.)	Grade 1	Grade 3	Grade 5	Grade 7
N	1670	405	409	422	434
a. Students do not use hand-held calculators in my mathematics class.	68.3%	77.5%	78.2%	66.1%	52.5%

PART IV - CLASSROOM INSTRUCTION

Q.30 (*Elementary*)
Q.36 (*Secondary*) - *Continued*

	Total (Elem.)	Grade 1	Grade 3	Grade 5	Grade 7
b. Unrestricted use.	1.0	1.0	1.5	0.5	0.9
c. To check work.	13.1	2.7	8.3	17.5	23.0
d. To shorten computation time and effort in class work.	4.3	0.5	0.7	4.5	11.1
e. To shorten computation time and effort on tests.	0.3	0.0	0.2	0.5	0.5
f. To shorten computation time and effort on non-test assignments.	5.4	0.2	1.5	5.2	14.1
g. To shorten computation time and effort so that more concepts may be covered.	3.1	0.7	1.2	2.8	7.4
h. To shorten computation time and effort so that a concept may be covered in more depth.	3.7	1.5	1.0	4.0	8.1
i. To drill on computation facts.	4.7	1.5	4.4	5.7	6.9
j. To offer enrichment problems.	12.9	4.0	7.1	12.6	27.0
k. Other	2.4	2.0	1.5	3.1	3.0

	Total (Sec.)	Grade 8	Grade 10	Grade 12
N	680	340	256	84
a. Students do not use hand-held calculators in my mathematics class.	34.6%	50.6%	24.2%	1.2%
b. Unrestricted use.	5.6	2.4	7.8	11.9
c. To check work.	36.3	26.5	47.7	41.7
d. To shorten computation time and effort in class work.	43.5	28.2	50.0	85.7
e. To shorten computation time and effort on tests.	11.3	5.9	14.1	25.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.30 (*Elementary*)
Q.36 (*Secondary*) - *Continued*

	Total (Sec.)	Grade 8	Grade 10	Grade 12
f. To shorten computation time and effort on non-test assignments.	42.6	26.8	49.2	86.9
g. To shorten computation time and effort so that more concepts can be covered.	29.4	18.2	34.8	58.3
h. To shorten computation time and effort so that a concept may be covered in more depth.	29.1	17.9	35.5	54.8
i. To drill on computation facts.	4.3	5.3	3.5	2.4
j. To offer enrichment problems.	26.3	20.3	32.0	33.3
k. Other	2.6	2.9	2.3	2.4

Q.31 (*Elementary*) *In which of the following ways do you make use of hand-held calculators*
Q.37 (*Secondary*) *in your mathematics class?*

	Total (Elem.)	Grade 1	Grade 3	Grade 5	Grade 7
N	1670	405	409	422	434
a. To do the computation so that the concept can be emphasized.	6.6%	0.7%	20.2%	6.6%	16.4%
b. To do the computation so that many more examples of a concept may be shown.	5.6	1.2	2.9	6.4	11.5
c. To show students how to use hand-held calculators.	11.4	4.0	8.8	10.0	22.4
d. Other	15.9	16.5	16.1	16.8	14.1

	Total (Sec.)	Grade 8	Grade 10	Grade 12
N	680	340	256	84
a. To do the computation so that the concept can be emphasized.	36.5%	25.0%	42.6%	64.3%
b. To do the computation so that many more examples of a concept may be shown.	32.1	21.5	38.7	54.8
c. To show students how to use hand-held calculators.	28.5	25.9	31.3	31.0
d. Other	10.6	14.1	8.6	2.4

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.23 (Secondary) *In which of the following ways is a computer used in your school for instructional purposes?*

	Total (Sec.)	Grade 8	Grade 10	Grade 12
N	747	383	275	89
a. A computer is not used in the school.	70.8%	73.9%	72.0%	53.9%
b. A computer is used by a computer club or other extra-curricular organization.	10.1	10.7	7.3	16.9
c. A computer is used in some mathematics classes.	19.7	17.8	17.8	33.7
d. A computer is used in some non-mathematics classes.	9.8	7.3	9.8	20.2
e. A computer is used in a computer science course.	17.7	14.4	16.0	37.1
f. Other	2.0	2.6	1.5	1.1

Q.33 (Secondary) (AMONG THOSE WHOSE SCHOOL USES A COMPUTER FOR INSTRUCTIONAL PURPOSES) *In which of the following ways do you make use of the computer in your mathematics class?*

	Total (Sec.)	Grade 8	Grade 10	Grade 12
N	218	100	77	41
a. Students do not use a computer in my mathematics class.	57.3%	59.0%	59.7%	48.8%
b. Students take a computer programming unit in my mathematics course.	19.3	25.0	16.9	9.8
c. Students 'run' pre-written programs.	11.9	13.0	13.0	7.3
d. Students use the computer to solve problems that are part of my mathematics course.	17.0	10.0	19.5	29.3
e. Students do projects using the computer.	15.6	13.0	15.6	22.0
f. Other	2.8	3.0	0.0	7.3

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.32 (*Elementary*) *Please mark the following evaluation techniques according to the importance*
Q.38 (*Secondary*) *of each in your mathematics program:*

a. STANDARDIZED MATHEMATICS TESTS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	**MEAN**	S.D.
Total (Elem.)	1958	8.8%	18.9	36.0	17.9	18.3	2.8	1.2
Grade 1	489	3.9%	10.8	32.9	20.9	31.5	2.3	1.1
Grade 3	484	7.9%	17.1	38.0	18.6	18.4	2.8	1.2
Grade 5	508	12.4%	23.6	36.0	15.7	12.2	3.1	1.2
Grade 7	477	11.1%	23.9	37.1	16.6	11.3	3.1	1.1
Total (Sec.)	725	11.4%	14.3	30.1	17.8	26.3	2.7	1.3
Grade 8	375	12.8%	15.2	32.3	15.5	24.3	2.8	1.3
Grade 10	263	8.7%	14.4	29.7	18.6	28.5	2.6	1.3
Grade 12	87	13.8%	10.3	21.8	25.3	28.7	2.6	1.4

b. TEACHER-PREPARED TESTS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1989	65.4%	24.2	7.8	1.1	1.5	4.5	.8
Grade 1	500	54.0%	24.2	14.6	2.8	4.4	4.2	1.1
Grade 3	494	62.1%	29.4	7.1	0.6	0.8	4.5	.7
Grade 5	515	69.5%	22.1	7.0	0.8	0.6	4.6	.7
Grade 7	480	76.0%	21.3	2.5	0.2	0.0	4.7	.5
Total (Sec.)	742	85.4%	13.1	1.3	0.0	0.1	4.8	.4
Grade 8	380	84.5%	13.2	2.4	0.0	0.0	4.8	.4
Grade 10	274	85.8%	13.9	0.4	0.0	0.0	4.9	.4
Grade 12	88	88.6%	10.2	0.0	0.0	0.1	4.9	.5

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.32 (*Elementary*)
Q.38 (*Secondary*) - *Continued*

c. TESTS PREPARED AT THE SCHOOL DISTRICT LEVEL

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1894	4.9%	16.9	29.1	19.8	29.3	2.5	1.2
Grade 1	474	5.1%	15.2	30.4	17.5	31.9	2.4	1.2
Grade 3	473	4.9%	16.9	32.8	18.8	26.6	2.5	1.2
Grade 5	491	5.3%	18.1	28.1	18.7	29.7	2.5	1.2
Grade 7	456	4.2%	17.3	25.2	24.3	28.9	2.4	1.2
Total (Sec.)	709	3.1%	8.7	19.6	19.2	49.4	2.0	1.1
Grade 8	366	3.3%	10.1	21.9	21.0	43.7	2.1	1.2
Grade 10	257	2.7%	8.2	17.5	15.2	56.4	1.9	1.1
Grade 12	86	3.5%	4.7	16.3	23.3	52.3	1.8	1.1

d. TESTS PREPARED FOR USE THROUGHOUT YOUR SCHOOL

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1865	6.8%	15.1	26.3	18.2	33.6	2.4	1.3
Grade 1	472	5.1%	12.7	28.8	16.7	36.7	2.3	1.2
Grade 3	458	7.2%	17.9	24.7	19.9	30.1	2.5	1.3
Grade 5	474	8.0%	16.0	26.6	17.5	31.9	2.5	1.3
Grade 7	461	6.5%	13.9	25.2	18.[illegible]	35.6	2.4	1.3
Total (Sec.)	727	18.0%	24.6	24.2	13.6	19.5	3.1	1.4
Grade 8	372	16.9%	23.1	25.0	15.6	19.4	3.0	1.4
Grade 10	268	17.5%	24.3	25.4	12.3	20.5	3.1	1.4
Grade 12	87	24.1%	32.2	17.2	9.2	17.2	3.4	1.4

PART IV - CLASSROOM INSTRUCTION

Q.32 *(Elementary)*
Q.38 *(Secondary)* - *Continued*

e. PERFORMANCE ON DAY-TO-DAY ACTIVITIES/ASSIGNMENTS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1983	81.5%	13.4	4.1	0.9	0.2	4.8	.6
Grade 1	500	90.6%	7.6	0.8	0.6	0.4	4.9	.5
Grade 3	492	89.0%	8.9	1.4	0.6	0.0	4.9	.4
Grade 5	513	77.6%	15.8	5.5	1.0	0.2	4.7	.6
Grade 7	478	68.4%	21.5	8.8	1.3	0.0	4.6	.7
Total (Sec.)	733	33.0%	35.2	23.6	6.4	1.8	3.9	1.0
Grade 8	375	37.6%	32.8	22.1	6.7	0.8	4.0	1.0
Grade 10	270	31.1%	38.5	21.5	5.9	3.0	3.9	1.0
Grade 12	88	19.3%	35.2	36.4	6.8	2.3	3.6	1.0

f. TEACHER OBSERVATIONS OF STUDENTS' WORK

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1987	82.3%	13.9	3.5	0.3	0.0	4.8	.5
Grade 1	500	93.2%	6.4	0.4	0.0	0.0	4.9	.3
Grade 3	494	90.3%	8.1	1.6	0.0	0.0	4.9	.4
Grade 5	513	78.0%	16.0	4.7	0.6	0.0	4.7	.6
Grade 7	480	67.5%	24.6	7.5	0.4	0.0	4.6	.6
Total (Sec.)	737	31.6%	32.3	25.5	8.7	1.9	3.8	1.0
Grade 8	378	35.2%	35.2	20.9	6.9	1.9	3.9	1.0
Grade 10	271	30.6%	26.6	29.9	11.1	1.8	3.7	1.1
Grade 12	88	19.3%	37.5	31.8	9.1	2.3	3.6	1.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.32 (*Elementary*)
Q.38 (*Secondary*) - *Continued*

g. TEACHER-PREPARED CHECKLISTS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1967	47.5%	24.5	17.3	6.7	4.0	4.0	1.1
Grade 1	495	60.0%	22.8	11.1	2.8	3.2	4.3	1.0
Grade 3	491	56.2%	22.2	14.9	4.9	1.8	4.3	1.0
Grade 5	508	42.1%	27.2	19.9	6.3	4.5	4.0	1.1
Grade 7	473	31.3%	25.8	23.5	12.9	6.6	3.6	1.2
Total (Sec.)	709	10.7%	14.2	25.0	21.0	29.1	2.6	1.3
Grade 8	364	12.6%	16.2	26.9	20.6	23.6	2.7	1.3
Grade 10	263	10.3%	13.7	24.7	19.0	32.3	2.5	1.3
Grade 12	82	3.7%	7.3	17.1	29.3	42.7	2.0	1.1

h. COMMERCIALLY PREPARED INVENTORIES

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1925	1.0%	5.3	19.9	23.2	50.5	1.8	1.0
Grade 1	488	0.8%	3.3	13.1	23.4	59.4	1.6	.9
Grade 3	477	0.4%	6.3	22.9	22.9	47.6	1.9	1.0
Grade 5	494	1.4%	5.7	20.9	22.7	49.4	1.9	1.0
Grade 7	466	1.5%	6.0	23.0	24.0	45.5	1.9	1.0
Total (Sec.)	716	0.0%	2.0	10.6	21.8	65.6	1.5	.8
Grade 8	513	0.0%	1.9	11.7	23.7	62.7	1.5	.8
Grade 10	370	0.0%	2.6	11.7	19.6	66.0	1.5	.8
Grade 12	117	0.0%	0.0	2.4	20.2	77.4	1.2	.5

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.33 *(Elementary)* Q.39 *(Secondary)* *Is there a Learning Assistance Centre in your school which offers assistance in mathematics?*

Grade	N	Yes
Total (Elem.)	1994	43.2%
Grade 1	503	36.8%
Grade 3	492	40.4%
Grade 5	515	47.0%
Grade 7	484	47.8%
Total (Sec.)	735	50.6%
Grade 8	377	52.8%
Grade 10	271	50.9%
Grade 12	87	40.2%

Q.34 *(Elementary)* Q.40 *(Secondary)* *Is there a resource person for mathematics available to you at the ---- district level? ---- school level?*

Grade	N	District level Yes	School level Yes
Total (Elem.)	1886	54.0%	21.9%
Grade 1	475	56.2%	16.0%
Grade 3	460	55.7%	20.5%
Grade 5	484	53.9%	24.9%
Grade 7	467	50.1%	25.9%
Total (Sec.)	652	27.3%	52.5%
Grade 8	325	35.1%	57.2
Grade 10	241	19.5%	49.6%
Grade 12	86	19.8%	41.4%

Q.35 *(Elementary)* Q.41 *(Secondary)* *Does your school have a mathematics program designed by the teachers in your school as a basis for mathematics instruction?*

Grade	N	Yes
Total (Elem.)	1978	15.4%
Grade 1	499	15.8%
Grade 3	489	15.1%
Grade 5	510	14.7%
Grade 7	480	15.8%
Total (Sec.)	734	60.5%
Grade 8	374	57.2%
Grade 10	271	64.6%
Grade 12	89	61.8%

B.C. Mathematics Assessment - Teacher Questionnaire

PART IV - CLASSROOM INSTRUCTION

Q.42 *(Secondary)* *On the average, about how much out-of-class time do you feel your students should spend on your mathematics assignments?*

Grade	N	None at all	Less than 30 minutes per day	30-60 minutes per day	More than an hour per day
Total (Sec.)	739	0.4%	63.5	35.9	0.3
Grade 8	377	0.3%	75.3	24.4	0.0
Grade 10	273	0.7%	61.5	37.7	0.0
Grade 12	89	0.0%	19.1	78.7	2.2

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.36 (*Elementary*) *Do you use at least one mathematics textbook in your mathematics class?*
Q.43 (*Secondary*)

Grade	N	Yes
Total (Elem.)	1993	96.3%
Grade 1	504	90.5%
Grade 3	494	96.8%
Grade 5	513	98.8%
Grade 7	482	99.4%
Total (Sec.)	737	94.0%
Grade 8	377	91.5%
Grade 10	271	95.9%
Grade 12	89	98.9%

Q.37 (*Elementary*) *Which of the following best describes your use of textbooks?*
Q.44 (*Secondary*)

Grade	N	One basic textbook	Multiple textbooks but one predominantly	Evenly distributed Multiple textbooks
Total (Elem.)	1907	26.7%	54.5	18.8
Grade 1	450	41.8%	51.1	7.1
Grade 3	476	20.8%	55.3	23.9
Grade 5	506	22.9%	56.9	20.2
Grade 7	475	22.3%	54.5	23.2
Total (Sec.)	631	39.0%	49.8	11.3
Grade 8	315	41.0%	47.9	11.1
Grade 10	233	33.9%	53.2	12.9
Grade 12	83	45.8%	47.0	7.2

Q.38 (*Elementary*) *Which of the following statements best describes what you would prefer for textbook prescription?*
Q.45 (*Secondary*)

Grade	N	One Prescribed Series	Several Recommended Series	No Prescribed Series	I don't know
Total (Elem.)	1903	16.8%	78.6	2.0	2.5
Grade 1	452	15.7%	78.8	3.1	2.4
Grade 3	475	12.0%	83.2	1.9	2.9
Grade 5	502	18.5%	76.7	2.0	2.8
Grade 7	474	20.9%	75.9	1.3	1.9
Total (Sec.)	638	25.1%	69.9	2.8	2.2
Grade 8	321	24.0%	69.8	3.1	3.1
Grade 10	236	23.3%	72.9	2.1	1.7
Grade 12	81	34.6%	61.7	3.7	0.0

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.39 (*Elementary*) *There should be an outline of the minimum learning outcomes at each*
Q.46 (*Secondary*) *level or grade to guide the teacher in the selection of mathematics textbooks, materials and activities.*

Grade	N	Agree	Disagree	I don't know
Total (Elem.)	1910	94.0%	3.6	2.5
Grade 1	456	93.6%	3.5	2.9
Grade 3	475	95.6%	3.2	1.3
Grade 5	504	92.5%	4.4	3.2
Grade 7	475	94.3%	3.2	2.5
Total (Sec.)	643	92.8%	4.0	3.1
Grade 8	323	92.9%	3.7	3.4
Grade 10	237	93.7%	4.2	2.1
Grade 12	83	90.4%	4.8	4.8

Q.41 (*Elementary*) *Generally speaking, how satisfactory is/are the textbook(s) you are*
Q.48 (*Secondary*) *using?*

Grade	N	Satisfactory	Not Satisfactory	Cannot Say
Total (Elem.)	1882	78.4%	20.1	1.5
Grade 1	440	80.0%	18.0	2.1
Grade 3	471	74.7%	23.8	1.5
Grade 5	495	79.0%	19.4	1.6
Grade 7	476	79.8%	19.1	1.1
Total (Sec.)	651	69.6%	28.1	2.3
Grade 8	321	61.4%	36.1	2.5
Grade 10	246	72.0%	25.2	2.8
Grade 12	84	94.0%	6.0	0.0

Q.42 (*Elementary*) *Generally speaking, out of every 5 pages, about how much of the*
Q.49 (*Secondary*) *textual material--apart from the exercises--do your students actually read?*

Grade	N	Less than 1	1 - 2	3 - 4	5
Total (Elem.)	1797	36.8%	30.7	27.4	5.1
Grade 1	369	55.6%	12.7	21.4	10.3
Grade 3	464	39.7%	34.7	22.4	3.2
Grade 5	495	31.3%	37.4	28.3	3.0
Grade 7	469	24.9%	33.9	36.0	5.1
Total (Sec.)	645	40.5%	34.3	20.5	4.8
Grade 8	322	41.3%	31.4	23.6	3.7
Grade 10	241	40.7%	35.7	17.8	5.8
Grade 12	82	36.6%	41.5	15.9	6.1

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.43 (*Elementary*) *Which of the following describe(s) how you use a textbook in your*
Q.50 (*Secondary*) *mathematics class?*

Grade	N	To develop a new concept	To review concepts developed in class	To provide exercises for drill and practice	Other
Total (Elem.)	1797	47.0%	71.3	98.6	2.4
Grade 1	369	32.8%	82.9	100.0	2.2
Grade 3	464	39.9%	71.0	96.3	1.9
Grade 5	495	55.4%	67.1	94.3	3.0
Grade 7	469	56.5%	66.5	95.9	2.6
Total (Sec.)	693	64.8%	48.8	91.5	1.6
Grade 8	345	38.3%	45.2	90.4	2.6
Grade 10	260	34.6%	53.5	91.9	0.4
Grade 12	88	25.0%	48.9	94.3	1.1

Q.44 (*Elementary*) *Which of the following best describes the kind of textbook you prefer?*
Q.51 (*Secondary*) *A textbook with---*

	Total (Elem.)	Grade 1	Grade 3	Grade 5	Grade 7
N	1846	437	461	488	460
a. Great emphasis on skills/drills.	15.8%	22.2%	16.1%	13.5%	11.7%
b. Greater emphasis on skills/drills than concepts/principles.	29.4	25.6	30.4	32.2	28.9
c. Equal emphasis on skills/drills and concepts/principles.	49.4	45.3	48.8	49.4	53.9
d. Greater emphasis on concepts/principles than skills/drills.	4.1	4.3	3.5	3.9	4.8
e. Great emphasis on concepts/principles.	1.4	2.5	1.3	1.0	0.7

	Total (Sec.)	Grade 8	Grade 10	Grade 12
N	646	320	244	82
a. Great emphasis on skills/drills.	15.6%	16.6%	15.2%	13.4%
b. Greater emphasis on skills/drills than concepts/principles.	30.7	30.0	34.4	22.0
c. Equal emphasis on skills/drills and concepts/principles.	48.9	50.0	44.3	58.5
d. Greater emphasis on concepts/principles than skills/drills.	4.2	3.4	5.3	3.7
e. Great emphasis on concepts/principles.	0.6	0.0	0.8	2.4

PART V - USE OF TEXTBOOKS

Q.45 *(Elementary)* *Please rate the following according to how important you feel it is for*
Q.52 *(Secondary)* *a textbook to do each:*

a. DEVELOP CONCEPTS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1883	46.9%	25.2	18.3	6.3	3.2	4.1	1.1
Grade 1	439	42.6%	22.6	18.7	9.1	7.1	3.8	1.3
Grade 3	470	45.1%	24.7	20.2	7.0	3.0	4.0	1.1
Grade 5	498	49.8%	25.3	18.1	5.0	1.8	4.2	1.0
Grade 7	476	49.6%	28.2	16.4	4.4	1.5	4.2	1.0
Total (Sec.)	660	46.1%	22.4	21.2	6.8	3.5	4.0	1.1
Grade 8	328	46.3%	24.1	18.9	6.7	4.0	4.0	1.1
Grade 10	248	44.8%	19.8	25.0	8.1	2.4	4.0	1.1
Grade 12	84	48.8%	23.8	19.0	3.6	4.8	4.1	1.1

b. (ELEM.) AND c. (SEC.) PROVIDE DRILL AND PRACTICE

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1899	78.2%	16.3	4.6	0.6	0.3	4.7	.6
Grade 1	446	76.0%	16.6	6.1	0.7	0.7	4.7	.7
Grade 3	475	77.0%	17.9	3.4	0.6	0.2	4.7	.6
Grade 5	501	78.4%	15.8	4.6	1.0	0.2	4.7	.6
Grade 7	477	80.3%	14.9	4.6	0.2	0.0	4.8	.5
Total (Sec.)	659	78.3%	16.8	4.1	0.5	0.3	4.7	.6
Grade 8	326	77.3%	16.9	5.5	0.0	0.3	4.7	.6
Grade 10	249	80.3%	15.7	2.8	0.8	0.4	4.7	.6
Grade 12	84	76.2%	20.2	2.4	1.2	0.0	4.7	.6

PART V - USE OF TEXTBOOKS

Q.45 *(Elementary)*
Q.52 *(Secondary)* - *Continued*

c. (ELEM.) AND d. (SEC.) PROVIDE ENRICHMENT MATERIALS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1891	43.7%	28.6	19.9	6.0	1.7	4.1	1.0
Grade 1	445	42.9%	27.6	21.6	6.5	1.3	4.0	1.0
Grade 3	474	48.9%	27.6	17.3	5.1	1.1	4.2	1.0
Grade 5	501	44.9%	28.9	17.6	6.6	2.0	4.1	1.0
Grade 7	471	38.0%	30.1	23.4	5.9	2.5	4.0	1.0
Total (Sec.)	656	35.2%	28.8	24.4	9.8	1.8	3.9	1.1
Grade 8	324	30.6%	30.2	25.0	11.7	2.5	3.7	1.1
Grade 10	248	40.3%	27.0	23.8	7.7	1.2	4.0	1.0
Grade 12	84	38.1%	28.6	23.8	8.3	1.2	3.9	1.0

d. (ELEM.) AND e. (SEC.) MOTIVATE THE STUDENT

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1870	50.7%	18.9	16.3	8.4	5.7	4.0	1.2
Grade 1	443	54.2%	19.0	15.6	7.2	4.1	4.1	1.2
Grade 3	466	53.9%	18.2	14.2	7.1	6.7	4.1	1.2
Grade 5	494	50.6%	21.5	16.4	7.7	3.8	4.1	1.1
Grade 7	473	44.4%	16.7	19.0	11.6	8.2	3.8	1.3
Total (Sec.)	655	44.3%	21.8	19.5	8.2	6.1	3.9	1.2
Grade 8	326	47.9%	20.2	18.1	7.4	6.4	4.0	1.2
Grade 10	245	42.0%	21.2	24.1	7.3	5.3	3.9	1.2
Grade 12	84	36.9%	29.8	11.9	14.3	7.1	3.8	1.3

PART V - USE OF TEXTBOOKS

Q.45 *(Elementary)*
Q.52 *(Secondary) - Continued*

e. (ELEM.) AND f. (SEC.) PROVIDE REMEDIAL MATERIAL

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1881	36.6%	23.6	22.1	11.2	6.4	3.7	1.2
Grade 1	443	32.7%	20.8	25.5	11.7	9.3	3.6	1.3
Grade 3	472	38.6%	24.8	23.7	8.7	4.2	3.8	1.2
Grade 5	495	39.4%	23.8	20.4	11.3	5.1	3.8	1.2
Grade 7	471	35.5%	24.8	19.1	13.2	7.4	3.7	1.3
Total (Sec.)	653	32.6%	21.7	28.0	12.6	5.1	3.6	1.2
Grade 8	323	35.3%	21.4	27.9	10.5	5.0	3.7	1.2
Grade 10	246	30.1%	24.4	27.2	13.0	5.3	3.6	1.2
Grade 12	84	29.8%	15.5	31.0	19.0	4.8	3.5	1.2

b. (SEC.) REINFORCE SKILLS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Sec.)	660	62.9%	27.3	9.1	0.8	0.0	4.5	.7
Grade 8	327	64.5%	28.1	7.3	0.0	0.0	4.6	.6
Grade 10	249	62.2%	26.5	10.0	1.2	0.0	4.5	.7
Grade 12	84	58.3%	26.2	13.1	2.4	0.0	4.4	.8

Q.46 *(Elementary)* *Please rate the following according to how important you feel it is for*
Q.53 *(Secondary)* *the teachers' edition of a mathematics textbook to provide each:*

The teachers' edition of a mathematics textbook should provide----

a. LESSON OBJECTIVES

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1889	55.3%	23.6	14.3	4.1	2.7	4.2	1.0
Grade 1	444	62.6%	21.2	11.7	2.5	2.0	4.4	.9
Grade 3	469	60.1%	20.9	13.2	3.6	2.1	4.3	1.0
Grade 5	502	50.6%	26.5	15.7	5.0	2.2	4.2	1.0
Grade 7	474	48.5%	25.3	16.5	5.3	4.4	4.1	1.1
Total (Sec.)	646	39.3%	26.2	20.7	6.7	7.1	3.8	1.2
Grade 8	324	44.4%	24.4	20.4	4.3	6.5	4.0	1.2
Grade 10	239	36.0%	27.6	21.3	8.4	6.7	3.8	1.2
Grade 12	83	28.9%	28.9	20.5	10.8	10.8	3.5	1.3

PART V - USE OF TEXTBOOKS

Q.46 (*Elementary*)
Q.53 (*Secondary*) - *Continued*

b. SUGGESTED DISCUSSION FOR LESSON

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1894	27.0%	31.4	26.8	9.3	5.4	3.7	1.1
Grade 1	444	29.5%	30.0	28.2	7.4	5.0	3.7	1.1
Grade 3	473	31.5%	32.6	22.8	7.6	5.5	3.8	1.1
Grade 5	503	28.2%	31.2	25.6	9.9	5.0	3.7	1.1
Grade 7	474	18.8%	31.9	30.8	12.2	6.3	3.4	1.1
Total (Sec.)	643	21.9%	28.0	33.3	10.0	6.8	3.5	1.1
Grade 8	321	23.7%	28.3	34.6	7.2	6.2	3.6	1.1
Grade 10	239	20.5%	30.5	30.1	13.0	5.9	3.5	1.1
Grade 12	83	19.3%	19.3	37.3	12.0	12.0	3.2	1.2

c. DEVELOPMENT OF THE LESSON'S MATHEMATICS CONTENT

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1871	38.1%	32.8	22.2	4.5	2.5	4.0	1.0
Grade 1	437	42.6%	30.9	20.6	4.3	1.6	4.1	1.0
Grade 3	466	43.6%	30.0	21.2	3.2	1.9	4.1	1.0
Grade 5	497	35.4%	34.4	23.3	4.8	2.0	4.0	1.0
Grade 7	471	31.4%	35.5	23.4	5.5	4.2	3.8	1.1
Total (Sec.)	640	23.6%	27.7	31.7	10.2	6.9	3.5	1.2
Grade 8	319	25.7%	30.4	28.5	8.8	6.6	3.6	1.2
Grade 10	239	23.0%	25.1	34.7	11.3	5.9	3.5	1.1
Grade 12	82	17.1%	24.4	35.4	12.2	11.0	3.2	1.2

PART V - USE OF TEXTBOOKS

Q.46 *(Elementary)*
Q.53 *(Secondary)* - *Continued*

d. EXERCISE ANSWERS AT END OF TEXT

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1865	35.4%	14.6	15.9	11.4	22.7	3.3	1.6
Grade 1	438	13.7%	9.1	22.8	16.7	37.7	2.4	1.4
Grade 3	460	36.3%	15.9	17.2	11.1	19.6	3.4	1.5
Grade 5	495	44.2%	16.2	10.3	9.9	19.4	3.6	1.6
Grade 7	472	45.3%	16.7	14.2	8.5	15.3	3.7	1.5
Total (Sec.)	641	47.6%	20.9	14.2	5.9	11.4	3.9	1.4
Grade 8	321	44.5%	22.4	14.0	4.7	14.3	3.8	1.4
Grade 10	236	48.3%	18.6	15.3	8.5	9.3	3.9	1.3
Grade 12	84	57.1%	21.4	11.9	3.6	6.0	4.2	1.2

e. ENRICHMENT MATERIALS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1891	51.1%	30.6	14.8	2.9	0.7	4.3	.9
Grade 1	445	56.4%	28.3	12.1	3.1	0.0	4.4	.8
Grade 3	473	53.5%	31.1	13.1	2.1	0.2	4.4	.8
Grade 5	499	52.1%	28.7	14.8	3.2	1.2	4.3	.9
Grade 7	474	42.6%	34.2	18.8	3.0	1.5	4.1	.9
Total (Sec.)	646	41.6%	31.1	20.7	5.6	0.9	4.1	1.0
Grade 8	324	44.1%	30.6	18.8	5.2	1.2	4.1	1.0
Grade 10	239	38.9%	32.6	22.2	5.9	0.4	4.0	.9
Grade 12	83	39.8%	28.9	24.1	6.0	1.2	4.0	1.0

PART V - USE OF TEXTBOOKS

Q.46 (*Elementary*)
Q.53 (*Secondary*) - *Continued*

f. REMEDIATION MATERIALS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1886	49.3%	28.3	15.2	6.0	1.3	4.2	1.0
Grade 1	443	52.0%	26.4	12.9	7.4	0.2	4.2	1.0
Grade 3	472	51.3%	28.6	16.3	3.2	0.6	4.3	.9
Grade 5	498	49.8%	27.7	14.5	6.4	1.6	4.2	1.0
Grade 7	473	43.1%	30.2	17.1	7.0	2.5	4.0	1.1
Total (Sec.)	645	37.6%	30.4	22.3	8.2	1.6	3.9	1.0
Grade 8	324	42.3%	29.3	21.6	5.9	0.9	4.1	1.0
Grade 10	237	32.5%	35.0	19.8	10.1	2.5	3.8	1.1
Grade 12	84	33.3%	21.4	32.1	11.9	1.2	3.7	1.1

g. FOLLOW-UP ACTIVITIES

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1891	47.8%	31.7	16.2	3.4	1.0	4.2	.9
Grade 1	446	57.4%	27.6	12.6	2.2	0.2	4.4	.8
Grade 3	474	54.4%	30.0	12.4	2.5	0.6	4.4	.8
Grade 5	497	43.3%	33.0	19.3	3.6	0.8	4.1	.9
Grade 7	474	36.9%	35.9	20.0	5.1	2.1	4.0	1.0
Total (Sec.)	644	29.8%	34.2	26.1	8.1	1.9	3.8	1.0
Grade 8	323	33.1%	34.1	24.5	7.4	0.9	3.9	1.0
Grade 10	237	27.0%	36.3	26.2	8.4	2.1	3.8	1.0
Grade 12	84	25.0%	28.6	32.1	9.5	4.8	3.6	1.1

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.46 *(Elementary)*
Q.53 *(Secondary)* - *Continued*

h. SUGGESTED RESOURCES

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1879	22.7%	24.7	34.5	13.8	4.2	3.5	1.1
Grade 1	442	31.0%	23.1	32.7	10.4	1.8	3.7	1.1
Grade 3	469	24.3%	25.4	34.5	12.8	3.0	3.6	1.1
Grade 5	494	17.8%	24.1	37.0	16.6	4.5	3.3	1.1
Grade 7	474	18.4%	26.4	32.7	15.2	7.4	3.3	1.2
Total (Sec.)	642	21.3%	25.7	31.8	16.5	4.7	3.4	1.1
Grade 8	323	21.1%	27.9	30.0	16.7	4.3	3.4	1.1
Grade 10	235	23.4%	26.0	31.1	15.3	4.3	3.5	1.1
Grade 12	84	16.7%	16.7	40.5	19.0	7.1	3.2	1.1

i. ACHIEVEMENT TESTS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1886	33.2%	29.0	23.5	9.3	5.0	3.8	1.2
Grade 1	442	19.2%	25.6	30.5	15.2	9.5	3.3	1.2
Grade 3	468	34.4%	29.5	24.1	8.8	3.2	3.8	1.1
Grade 5	502	41.0%	28.7	19.9	6.4	4.0	4.0	1.1
Grade 7	474	36.9%	31.9	20.0	7.4	3.8	3.9	1.1
Total (Sec.)	648	34.9%	30.2	21.8	7.4	5.7	3.8	1.2
Grade 8	325	36.3%	30.2	24.3	5.8	3.4	3.9	1.1
Grade 10	239	36.0%	29.7	17.2	9.2	7.9	3.8	1.3
Grade 12	84	26.2%	32.1	25.0	8.3	8.3	3.6	1.2

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.46 *(Elementary)*
Q.53 *(Secondary)* - *Continued*

j. DIAGNOSTIC TESTS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1893	43.8%	27.9	18.9	6.0	3.4	4.0	1.1
Grade 1	445	30.3%	28.3	26.5	9.7	5.2	3.7	1.2
Grade 3	470	42.6%	29.8	20.0	5.3	2.3	4.0	1.0
Grade 5	503	51.7%	27.0	13.7	4.6	3.0	4.2	1.0
Grade 7	475	49.5%	26.7	16.0	4.6	3.2	4.1	1.1
Total (Sec.)	647	39.9%	30.0	20.4	6.2	3.6	4.0	1.1
Grade 8	325	41.5%	30.5	22.5	3.7	1.8	4.1	1.0
Grade 10	239	42.7%	28.9	15.1	8.4	5.0	4.0	1.2
Grade 12	83	25.3%	31.3	27.7	9.6	6.0	3.6	1.1

k. SUGGESTED TEACHING AIDS

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1881	28.9%	32.6	28.6	8.1	1.7	3.8	1.0
Grade 1	441	38.8%	30.2	24.3	5.9	0.9	4.0	1.0
Grade 3	470	33.6%	33.0	25.3	6.6	1.5	3.9	1.0
Grade 5	500	24.8%	31.8	33.4	8.4	1.6	3.7	1.0
Grade 7	470	19.4%	35.5	30.9	11.5	2.8	3.6	1.0
Total (Sec.)	644	18.3%	28.9	36.0	13.0	3.7	3.5	1.0
Grade 8	321	21.5%	29.6	36.1	10.3	2.5	3.6	1.0
Grade 10	239	16.3%	31.8	34.7	13.4	3.8	3.4	1.0
Grade 12	84	11.9%	17.9	39.3	22.6	8.3	3.0	1.1

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.46 *(Elementary)*
Q.53 *(Secondary)* - *Continued*

l. SUGGESTED TIME ALLOCATION FOR EACH TOPIC

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1868	11.1%	15.3	30.6	22.3	20.8	2.7	1.3
Grade 1	442	10.9%	11.3	30.1	23.1	24.7	2.6	1.3
Grade 3	462	12.3%	13.6	29.2	24.7	20.1	2.7	1.3
Grade 5	496	12.3%	18.1	31.5	19.8	18.3	2.9	1.3
Grade 7	468	8.8%	17.5	31.4	21.8	20.5	2.7	1.2
Total (Sec.)	642	12.8%	22.9	33.5	17.9	12.9	3.0	1.2
Grade 8	321	13.4%	23.1	31.8	19.3	12.5	3.1	1.2
Grade 10	230	11.8%	21.4	36.6	16.4	13.9	3.0	1.2
Grade 12	83	13.3%	26.5	31.3	16.9	12.0	3.1	1.2

m. OVERPRINTED ANSWERS TO EXERCISES (PRINTED THROUGHOUT THE TEXT)

Grade	N	Very Important (5)	(4)	(3)	(2)	Not Important (1)	MEAN	S.D.
Total (Elem.)	1860	41.5%	16.5	16.1	10.9	15.0	3.6	1.5
Grade 1	437	18.1%	11.7	22.9	19.9	27.5	2.7	1.4
Grade 3	465	45.2%	15.1	15.3	10.3	14.2	3.7	1.5
Grade 5	488	54.9%	17.8	10.2	7.2	9.8	4.0	1.4
Grade 7	470	45.7%	21.1	16.6	7.0	9.6	3.9	1.3
Total (Sec.)	634	39.7%	18.3	19.1	9.0	13.9	3.6	1.4
Grade 8	318	45.9%	17.9	17.6	7.5	11.0	3.8	1.4
Grade 10	233	35.6%	17.2	21.5	11.2	14.6	3.5	1.4
Grade 12	83	27.7%	22.9	18.1	8.4	22.9	3.2	1.5

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.40A (*Elementary*) *Grade 1, 3 and 5 Teachers: Which textbook(s) do you use in your mathematics class?*

	Grade 1	Grade 3	Grade 5
N	456	476	506
a. Investigating School Mathematics	88.4%	88.2%	88.5%
b. Project Mathematics	33.3	37.6	23.7
c. Heath Elementary	25.2	47.1	64.6
d. Seeing Through Arithmetic	14.5	38.9	45.8
e. Other	7.2	15.3	6.7

Q.47 (*Elementary*) *Grade 1, 3 and 5 Teachers: Please mark each of the textbooks listed below with respect to the reading level of the textbooks.*

For my class, the reading level is:

a. INVESTIGATING SCHOOL MATHEMATICS

Grade	N	I don't know	Too high (1)	About right (2)	Too low (3)	MEAN	S.D.
Grade 1	411	5.4%	11.2	81.8	1.7	1.9	.4
Grade 3	435	5.7%	27.8	66.0	0.5	1.7	.5
Grade 5	456	4.8%	24.6	69.7	0.9	1.8	.5

b. PROJECT MATHEMATICS

Grade	N	I don't know	Too high (1)	About right (2)	Too low (3)	MEAN	S.D.
Grade 1	311	43.7%	19.0	36.7	0.6	1.7	.5
Grade 3	373	34.0%	30.8	34.9	0.3	1.5	.5
Grade 5	375	41.9%	35.5	21.6	1.1	1.4	.5

c. HEATH ELEMENTARY MATHEMATICS

Grade	N	I don't know	Too high (1)	About right (2)	Too low (3)	MEAN	S.D.
Grade 1	302	53.3%	13.2	29.8	3.6	1.8	.6
Grade 3	388	32.5%	8.5	55.2	3.9	1.9	.4
Grade 5	426	18.5%	9.2	65.5	6.8	2.0	.4

PART V - USE OF TEXTBOOKS

Q.48 (*Elementary*) *Grade 1, 3 and 5 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on computation with whole numbers.*

The textbook stresses computation with whole numbers:

a. INVESTIGATING SCHOOL MATHEMATICS

Grade	N	I don't know	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
Grade 1	412	5.3%	2.7	77.4	14.6	2.1	.4
Grade 3	440	7.3%	2.3	63.0	27.5	2.3	.5
Grade 5	470	5.5%	1.5	57.0	36.0	2.4	.5

b. PROJECT MATHEMATICS

Grade	N	I don't know	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
Grade 1	320	43.8%	3.8	26.6	25.9	2.4	.6
Grade 3	380	41.3%	1.3	20.8	36.6	2.6	.5
Grade 5	381	52.8%	2.4	16.3	28.6	2.6	.6

c. HEATH ELEMENTARY MATHEMATICS

Grade	N	I don't know	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
Grade 1	309	54.0%	4.9	27.2	13.9	2.2	.6
Grade 3	393	35.1%	1.3	46.6	17.0	2.2	.5
Grade 5	431	20.4%	4.2	55.0	20.4	2.2	.5

Q.49 (*Elementary*) *Grade 1, 3 and 5 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on problem solving.*

The textbook stresses problem solving:

a. INVESTIGATING SCHOOL MATHEMATICS

Grade	N	I don't know	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
Grade 1	405	5.9%	0.5	34.1	59.5	2.6	.5
Grade 3	440	9.3%	2.0	60.2	28.4	2.3	.5
Grade 5	467	5.1%	3.2	58.0	33.6	2.3	.5

PART V - USE OF TEXTBOOKS

Q.49 (*Elementary*) - *Continued*

b. PROJECT MATHEMATICS

Grade	N	I don't know	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
Grade 1	309	48.5%	3.9	33.0	14.6	2.2	.6
Grade 3	370	45.7%	8.6	24.6	21.1	2.2	.7
Grade 5	378	55.3%	9.0	23.3	12.4	2.1	.7

c. HEATH ELEMENTARY MATHEMATICS

Grade	N	I don't know	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
Grade 1	302	56.6%	0.3	24.2	18.9	2.4	.5
Grade 3	392	38.8%	1.8	34.4	25.0	2.4	.5
Grade 5	429	23.5%	0.9	38.0	37.5	2.5	.5

Q.50 (*Elementary*) *Grade 1, 3 and 5 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on metric measurement.*

The textbook stresses metric measurement:

a. INVESTIGATING SCHOOL MATHEMATICS

Grade	N	I don't know	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
Grade 1	407	6.6%	1.0	55.5	36.9	2.3	.5
Grade 3	436	11.5%	2.3	55.5	30.7	2.4	.5
Grade 5	471	8.3%	0.8	60.5	30.4	2.3	.5

b. PROJECT MATHEMATICS

Grade	N	I don't know	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
Grade 1	312	49.7%	1.3	29.8	19.2	2.4	.5
Grade 3	373	48.8%	2.7	32.4	16.1	2.3	.5
Grade 5	381	58.0%	1.3	31.5	9.2	2.2	.5

PART V - USE OF TEXTBOOKS

Q.50 *(Elementary) - Continued*

c. HEATH ELEMENTARY MATHEMATICS

Grade	N	I don't know	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
Grade 1	302	58.3%	0.0	20.2	21.5	2.5	.5
Grade 3	388	44.8%	1.0	34.8	44.8	2.3	.5
Grade 5	428	26.6%	0.0	52.3	26.6	2.3	.5

Q.40B *(Elementary)* *Grade 7 Teachers: Which textbook(s) do you use in your mathematics class?*

	% using N = 479
a. School Mathematics I	79.5
b. Mathematics I	59.9
c. Essentials of Mathematics I	47.6
d. Contemporary Mathematics, Book I	43.6
e. Other	3.3

Q.51 *(Elementary)* *Grade 7 Teachers: Please mark each of the textbooks listed below with respect to the reading level of the textbook.*

For my class the reading level is:

	N	I don't know	Too high (1)	About right (2)	Too low (3)	MEAN	S.D.
a. School Mathematics I	438	8.4%	23.3	66.9	1.4	1.8	.5
b. Mathematics I	423	13.5%	36.4	49.4	0.7	1.6	.5
c. Essentials of Mathematics I	409	17.1%	5.1	45.2	32.5	2.3	.6

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.52 *(Elementary)* *Grade 7 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on computation with whole numbers.*

The textbook stresses computation with whole numbers:

	N	I don't know	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
a. School Mathematics I	438	10.0%	1.4	58.4	30.1	2.3	.5
b. Mathematics I	425	19.5%	1.4	45.9	33.2	2.4	.5
c. Essentials of Mathematics I	410	22.2%	6.3	39.5	32.0	2.3	.6

Q.53 *(Elementary)* *Grade 7 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on problem solving.*

The textbook stresses problem solving:

	N	I don't know	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
a. School Mathematics I	444	10.1%	2.5	45.7	41.7	2.4	.5
b. Mathematics I	427	21.3%	2.1	35.4	41.2	2.5	.6
c. Essentials of Mathematics I	416	24.8%	0.5	22.8	51.9	2.7	.5

Q.54 *(Elementary)* *Grade 7 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on metric measurement.*

The textbook stresses metric measurement:

	N	I don't know	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
a. School Mathematics I	440	10.2%	0.7	58.0	31.1	2.3	.5
b. Mathematics I	423	20.3%	0.2	48.7	30.7	2.4	.5
c. Essentials of Mathematics I	413	26.9%	39.7	33.4	26.9	2.5	.5

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.47A (*Secondary*) *Grade 8 Teachers: Which textbook(s) do you use in your mathematics class(es)?*

		% using N = 345
a.	School Mathematics II	59.7
b.	Mathematics II	59.4
c.	Essentials of Mathematics II	35.9
d.	Fundemental Concepts of Elementary Mathematics	0.6
e.	Other	9.0

Q.54 (*Secondary*) *Grade 8 Teachers: Please mark each of the textbooks listed below with respect to the reading level of the textbook.*

For my class, the reading level is:

		N	Cannot Say	Too high (1)	About right (2)	Too low (3)	MEAN	S.D.
a.	School Mathematics II	292	18.5%	24.0	55.1	2.4	1.7	.5
b.	Mathematics II	291	13.7%	30.2	54.6	1.4	1.7	.5
c.	Essentials to Mathematics II	275	25.8%	5.8	41.8	26.5	2.3	.6

Q.55 (*Secondary*) *Grade 8 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on computation.*

This textbook stresses computation:

		N	Cannot Say	Too high (1)	About right (2)	Too low (3)	MEAN	S.D.
a.	School Mathematics II	291	21.0%	2.1	41.2	35.7	2.4	.5
b.	Mathematics II	288	16.0%	1.7	49.0	33.3	2.4	.5
c.	Essentials of Mathematics II	276	29.0%	3.6	38.4	29.0	2.4	.6

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.56 *(Secondary)* *Grade 8 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on problem solving.*

This textbook stresses problem solving:

	N	Cannot Say	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
a. School Mathematics II	292	21.2%	2.4	42.8	33.6	2.4	.5
b. Mathematics II	292	15.4%	2.7	46.2	35.6	2.4	.6
c. Essentials of Mathematics II	273	31.9%	0.4	30.8	37.0	2.5	.5

Q.57 *(Secondary)* *Grade 8 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on enrichment.*

This textbook stresses enrichment:

	N	Cannot Say	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
a. School Mathematics II	289	20.4%	5.2	55.7	18.7	2.2	.5
b. Mathematics II	289	15.9%	5.5	58.5	20.1	2.2	.5
c. Essentials of Mathematics II	269	33.1%	1.1	31.2	34.6	2.5	.5

Q.47B *(Secondary)* *Grade 10 Teachers: Which textbook(s) do you use in your mathematics class?*

	% using N = 260
a. Mathematics for a Modern World, Book 2	73.5
b. Geometry	20.8
c. Mathematics: A Modern Approach	22.3
d. Trouble-Shooting Mathematics Skills	21.2
e. Essentials of Mathematics 3	8.1
f. Modern Algebra, Book I - Modules 4, 5, 6	48.8
g. Mathematical Pursuits Two	8.5
h. Business and Consumer Mathematics	36.5
i. Career Mathematics, Industry and Trade	22.3
j. Other	8.5

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.58 *(Secondary)* *Grade 10 Teachers: Please mark each of the textbooks listed below with respect to the reading level of the textbook.*

For my class, the reading level is:

	N	Cannot Say	Too high (1)	About right (2)	Too low (3)	MEAN	S.D.
a. Mathematics for a Modern World	236	11.9%	3.0	79.2	5.9	2.0	.3
b. Geometry	198	42.9%	35.9	21.2	0.0	1.4	.5
c. Mathematics: A Modern Approach	198	41.4%	4.0	46.0	8.6	2.1	.5
d. Trouble Shooting Mathematics Skills	195	36.4%	1.0	38.5	23.1	2.3	.5
e. Essentials of Mathematics 3	186	52.2%	0.5	21.5	25.8	2.5	.5
f. Modern Algebra, Book I - Modules 4 - 6	208	24.0%	26.0	50.0	0.0	1.7	.5
g. Mathematics Pursuits Two	185	59.5%	18.4	18.4	3.8	1.6	.6
h. Business and Consumer Mathematics	200	35.0%	14.5	46.5	4.0	1.8	.5
i. Career Mathematics, Industry and Trade	193	54.4%	4.7	37.3	3.6	2.0	.4

Q.59 *(Secondary)* *Grade 10 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on computation.*

This textbook stresses computation:

	N	Cannot Say	Too high (1)	About right (2)	Too low (3)	MEAN	S.D.
a. Mathematics for a Modern World	232	12.1%	0.4	51.3	36.2	2.4	.5
b. Geometry	190	46.8%	3.2	27.4	22.6	2.4	.6
c. Mathematics: A Modern Approach	198	40.9%	5.1	41.9	12.1	2.1	.5
d. Trouble Shooting Mathematics Skills	194	33.5%	7.2	54.6	4.6	2.0	.4
e. Essentials of Mathematics 3	188	56.4%	1.1	24.5	18.1	2.4	.5
f. Modern Algebra, Book I - Modules 4 - 6	206	23.8%	1.0	60.2	15.0	2.2	.4
g. Mathematical Pursuits Two	183	67.2%	2.7	16.9	13.1	2.3	.6
h. Business and Consumer Mathematics	201	35.3%	6.5	50.7	7.5	2.0	.5
i. Career Mathematics, Industry and Trade	192	56.3%	2.6	33.9	7.3	2.1	.5

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.60 *(Secondary)* *Grade 10 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on problem solving.*

This textbook stresses problem solving:

		N	Cannot Say	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
a.	Mathematics for a Modern World	228	12.7%	0.4	50.0	36.8	2.4	.5
b.	Geometry	191	44.5%	11.0	35.1	9.4	2.0	.6
c.	Mathematics: A Modern Approach	191	42.4%	0.5	29.8	27.2	2.5	.5
d.	Trouble Shooting Mathematics Skills	190	39.5%	0.0	31.1	29.5	2.5	.5
e.	Essentials of Mathematics 3	183	57.9%	0.0	17.5	24.6	2.6	.5
f.	Modern Algebra, Book I - Modules 4 - 6	205	24.9%	5.4	63.4	6.3	2.0	.4
g.	Mathematical Pursuits Two	179	68.7%	3.9	19.6	7.8	2.1	.6
h.	Business and Consumer Mathematics	196	39.4%	3.0	47.5	10.1	2.1	.5
i.	Consumer Mathematics, Industry and Trade	189	58.2%	1.6	34.9	5.3	2.1	.4

Q.61 *(Secondary)* *Grade 10 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on enrichment.*

This textbook stresses enrichment:

		N	Cannot Say	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
a.	Mathematics for a Modern World	227	13.2%	0.4	35.2	51.1	2.5	.5
b.	Geometry	187	43.9%	8.6	36.9	10.7	2.0	.6
c.	Mathematics: A Modern Approach	188	44.1%	0.0	16.0	39.9	2.7	.5
d.	Trouble Shooting Mathematics Skills	189	43.4%	0.0	17.5	39.2	2.7	.5
e.	Essentials of Mathematics 3	180	61.1%	0.6	15.0	23.3	2.6	.5
f.	Modern Algebra, Book I - Modules 4 - 6	205	25.4%	3.4	58.0	13.2	2.1	.5
g.	Mathematical Pursuits Two	180	67.8%	4.4	20.6	7.2	2.1	.6
h.	Business and Consumer Mathematics	198	39.9%	2.0	36.4	21.7	2.3	.5
i.	Career Mathematics, Industry and Trade	188	58.5%	0.0	28.2	13.3	2.3	.5

PART V - USE OF TEXTBOOKS

Q.47C (*Secondary*) *Grade 12 Teachers: Which textbook(s) do you use in your mathematics class(es)?*

		% using N = 88
a.	Modern Algebra and Trigonometry, Book 2	88.6
b.	Introduction to Calculus	67.0
c.	Mathematics for a Modern World 1112	13.6
d.	Using Advanced Algebra	52.3
e.	Pre-Calculus Mathematics	21.6
f.	Other	1.1

Q.62 (*Secondary*) *Grade 12 Teachers: Please mark each of the textbooks listed below with respect to the reading level of the textbook.*

For my class, the reading level is:

		N	Cannot Say	Too high (1)	About right (2)	Too low (3)	MEAN	S.D.
a.	Modern Algebra and Trigonometry II	85	0.0%	61.2	38.8	0.0	1.4	.5
b.	Introduction to Calculus	81	17.3%	17.3	58.0	7.4	1.9	.5
c.	Mathematics for a Modern World 1112	77	49.4%	0.0	29.9	20.8	2.4	.5
d.	Using Advanced Algebra	81	24.7%	1.2	70.4	3.7	2.0	.3
e.	Pre-Calculus Mathematics	78	44.9%	34.6	20.5	0.0	1.4	.5

Q.63 (*Secondary*) *Grade 12 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on computation.*

The textbook stresses computation:

		N	Cannot Say	Too high (1)	About right (2)	Too low (3)	MEAN	S.D.
a.	Modern Algebra and Trigonometry II	84	1.2%	9.5	79.8	9.5	2.0	.4
b.	Introduction to Calculus	81	17.3%	3.7	59.3	19.8	2.2	.5
c.	Mathematics for a Modern World 1112	74	63.5%	4.1	25.7	6.8	2.1	.6
d.	Using Advanced Algebra	80	30.0%	1.2	66.2	2.5	2.0	.2
e.	Pre-Calculus Mathematics	75	65.3%	1.3	26.7	6.7	2.2	.5

B.C. Mathematics Assessment - Teacher Questionnaire

PART V - USE OF TEXTBOOKS

Q.64 *(Secondary)* *Grade 12 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress in problem solving.*

The textbook stresses problem solving:

	N	Cannot Say	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
a. Modern Algebra and Trigonometry II	86	2.3%	8.1	80.2	9.3	2.0	.4
b. Introduction to Calculus	82	19.5%	2.4	36.6	41.5	2.5	.6
c. Mathematics for a Modern World 1112	76	63.2%	0.0	18.4	18.4	2.5	.5
d. Using Advanced Algebra	81	32.1%	0.0	51.9	16.0	2.2	.4
e. Pre-Calculus Mathematics	76	65.8%	1.3	26.3	6.6	2.2	.5

Q.65 *(Secondary)* *Grade 12 Teachers: Please mark each of the textbooks listed below with respect to the textbook's stress on enrichment.*

The textbook stresses enrichment:

	N	Cannot Say	Too much (1)	About right (2)	Too little (3)	MEAN	S.D.
a. Modern Algebra and Trigonometry II	86	2.3%	7.0	73.3	17.4	2.1	.5
b. Introduction to Calculus	83	24.1%	1.2	24.1	50.6	2.7	.5
c. Mathematics for a Modern World 1112	77	59.7%	0.0	11.7	28.6	2.7	.5
d. Using Advanced Algebra	82	32.9%	0.0	36.6	30.5	2.5	.5
e. Pre-Calculus Mathematics	79	60.8%	11.4	22.8	5.1	1.8	.6